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V. 41 #11

Manufacturing Confectioner

specialized publication for confectionery manufacturers

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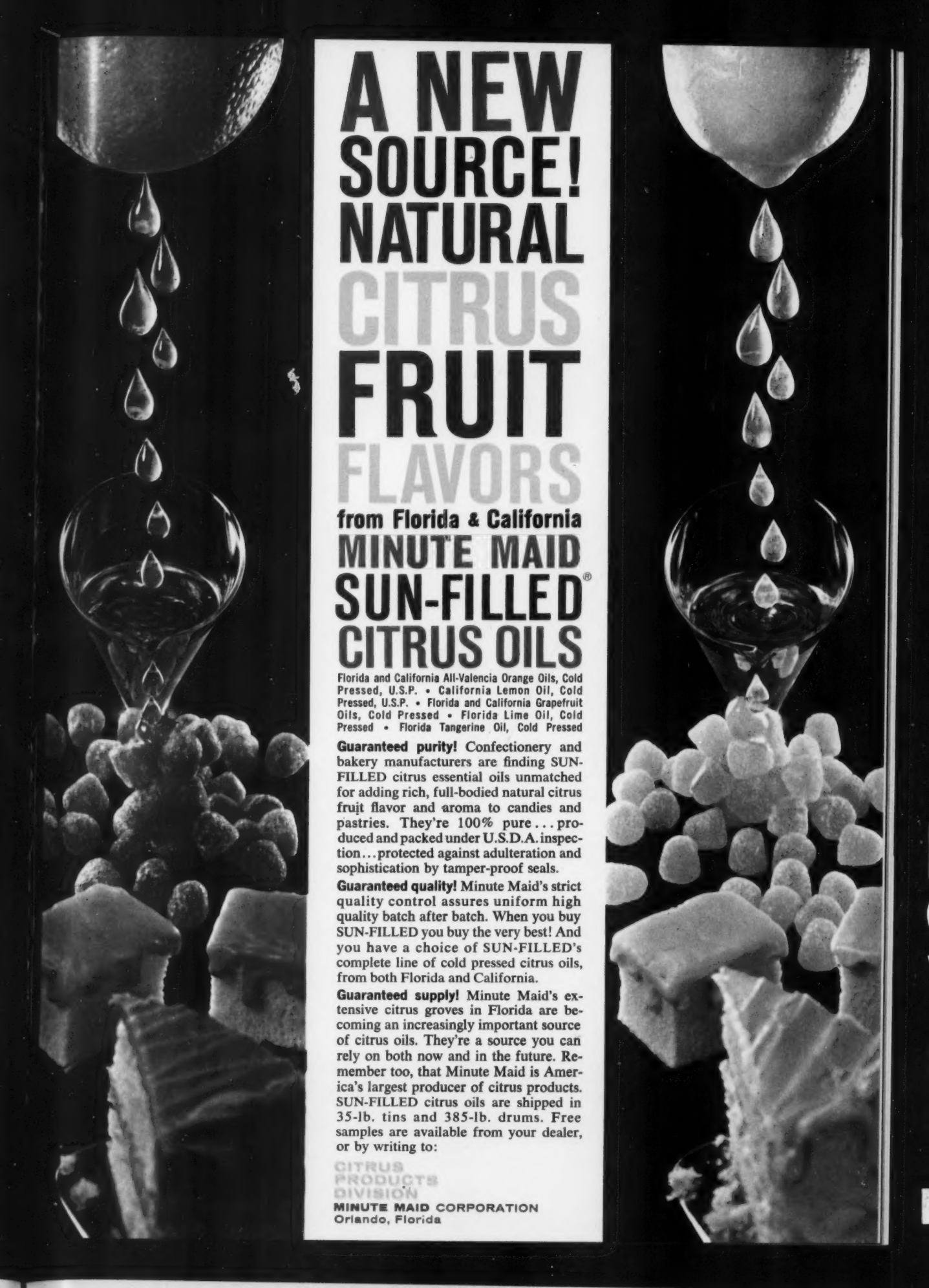

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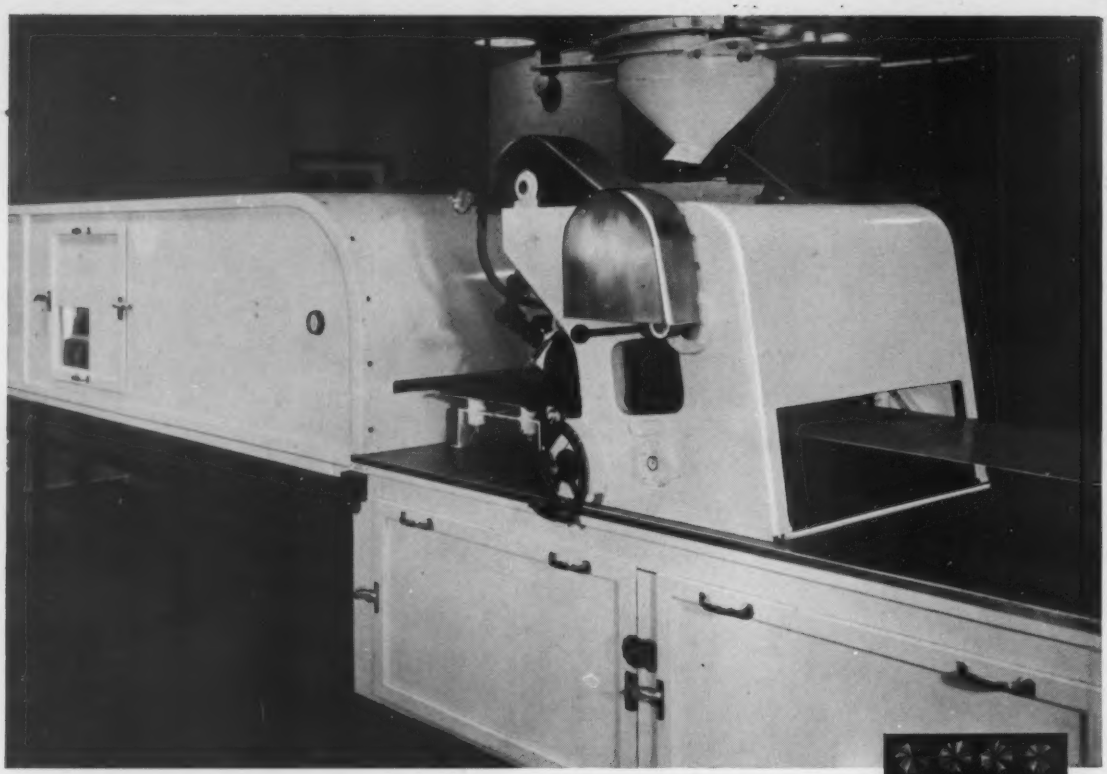
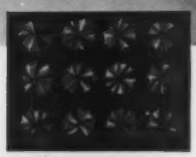
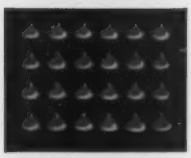
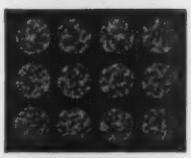
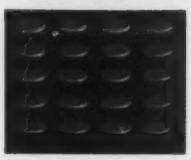


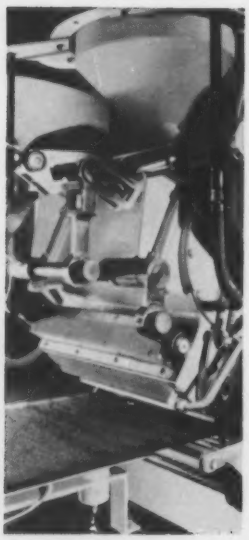
JENSEN Steel Belt Depositing Plant











for depositing chocolate direct on to a steel band conveyor – no moulds being used

This is a new type of plant joining the rank of the world renowned JENSEN Plants. The outstanding features characterizing all depositors on JENSEN Plants are utilized here for the minute depositing of small chocolate pieces of varying shape: buds, stars, wafers, Non Pareils and the like, a big sales item in many countries, well fitted for packing in transparent bags.

Exceptional economy:

No investment in moulds. The area of the continuously travelling steel band is fully utilized. Waste percentage of chocolate is practically equal to zero. The plant works automatically requiring only one part time operator. The sturdy and safe design and first class material and workmanship make life time long and maintenance cost small.

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PMCA announces production conference program

First announcement of speakers scheduled for the 16th annual Production Conference of the Pennsylvania Manufacturing Confectioners' Association includes:

Dr. C. Del Boca, The Nestle Company, Vevey, Switzerland;

Prof. Dr. R. Heiss, director of the Institute of Food Technology and Packaging, Munich, Germany;

Dr. E. Hanssen, Chief Chemist, H. Bahlsens Keksfabrik K. G., Hannover, Germany.

Sanitation vs. Absenteeism will be discussed Thursday, April 26, by A. E. Abrahamson, director, Bureau of Sanitary Inspections, The City of New York Health Department. Bernard R. Freudenthal, president Lab Automated Chemicals Corp., Baltimore, Md., will discuss technical approaches to solving the problem.

In addition, many other subjects of great importance to the candy and confectionery industry will be covered by prominent speakers.

The three-day conference, which is held in cooperation with Franklin and Marshall College, Lancaster, Pa., will open April 25, 1962 at the School.

Ambrosia purchases controlling interest in Hooton

Ambrosia Chocolate Co., Milwaukee, has acquired controlling interest in the Hooton Chocolate Co., Newark, N. J. The Hooton plant will continue production of chocolate and cocoa products at Newark with no changes in operation or personnel. According to Ambrosia President L. Russell Cook, the new acquisition is a part of the firm's long-range growth plans and answers the need for additional manufacturing facilities in the East.

Musser gets new post at Klein Chocolate

Jay C. Musser has been named executive vice president of Klein Chocolate Company, Elizabethtown, Pa. Former vice president in charge of manufacturing, Musser is succeeded in this position by Production Manager Paul A. Miller.

According to Owner-General Manager Wm. Klein, Jr., the changes are the first in a series of steps in a long-range plan of realignment in executive duties created by the firm's growth. As the senior executive officer of the company, Musser will devote his time

Confectionery & Chocolate Sales in August jumped 5%

Sales of confectionery and chocolate products in August this year were 5% higher than a year ago. Manufacturer-wholesalers reported sales of $71.9 million which was 6% above sales in August 1960. Manufacturer-retailers sales were down a fraction from last year, and chocolate manufacturers sales in August were 3% above sales reported for August 1960.

TABLE 1.—CONFECTIONERY AND COMPETITIVE CHOCOLATE PRODUCTS: DOLLAR SALES BY KIND OF BUSINESS

Item	Estimated sales of current month and comparisons: August 1961 ($1,000)	Percent change August 1961 from August 1960	Estimated sales year to date: 8 months 1961 ($1,000)	Percent change from 8 months 1960
Confectionery and competitive chocolate products, estimated total	89,746	+ 5	724,314	+ 3
Manufacturer-wholesalers	71,936	+ 6	578,080	+ 2
Manufacturer-retailers[1]	4,356	(2)	45,082	— 1
Chocolate manufacturers	13,454	+ 3	101,152	+10
TOTAL ESTIMATED SALES OF MANUFACTURER-WHOLESALERS BY DIVISION AND STATES				
New England	7,580	+ 5	55,668	— 2
Middle Atlantic	22,635	+12	179,743	+ 5
N. Y. and N. J.	15,513	+14	107,389	+ 6
Pa.	7,122	+ 9	72,354	+ 3
East North Central	25,936	+ 2	210,168	— 2
Ill.	23,348	+ 2	185,631	— 3
Ohio and Ind.	1,765	— 1	17,110	+ 7
Mich. and Wis.	823	— 1	7,427	— 2
West North Central	3,502	— 9	28,798	(2)
Minn., Kan., S. Dak., and Neb.	1,561	—26	16,277	— 8
Iowa and Mo.	1,941	+13	12,521	+14
South Atlantic	3,611	+ 1	28,582	+ 1
Md., D. of C., Va., W. Va., N. Car., and S. Car.	1,512	+ 8	12,169	+ 1
Ga. and Fla.	2,099	— 3	16,413	+ 2
East South Central: (Ky., Tenn., Ala., and Miss.)	1,734	+20	13,301	+ 9
West South Central: (Ark., La., Okla., and Tex.)	1,568	+12	18,298	+ 9
Mountain: (Ariz., Colo., Idaho, N. Mex., and Utah)	909	+ 7	7,281	+ 5
Pacific	4,461	+ 8	36,241	+12
Calif.	3,700	+14	30,206	+15
Wash. and Ore.	761	—14	6,035	+ 1

[1]Retailers with two or more outlets.
[2]Less than 0.5 percent change.

TABLE 2.—POUNDAGE AND DOLLAR SALES OF SELECTED MANUFACTURER-WHOLESALERS AND CHOCOLATE MANUFACTURERS, BY TYPE OF CONFECTIONERY

Type of product[1]	August 1961: Pounds (1,000)	August 1961: Value ($1,000)	First 8 months: Pounds (1,000) 1961	First 8 months: Percent change from 1960	First 8 months: Value ($1,000) 1961	First 8 months: Percent change from 1960
TOTAL SALES OF SELECTED ESTABLISHMENTS	115,406	44,728	879,809	+ 5	347,857	+ 5
Package goods made to retail at:						
$1 or more per lb.	2,218	2,111	24,048	— 7	27,473	— 4
$.50 to $.99 per lb.	9,941	4,978	71,576	+15	36,212	+13
Less than $.50 per lb.	16,534	4,455	135,680	+ 1	35,992	(2)
Bar goods	52,547	20,739	406,480	+ 5	161,317	+ 3
5¢ and 10¢ specialties	16,062	7,288	107,992	+ 3	49,678	+ 5
Bulk goods[3]	18,104	5,157	134,033	+ 8	37,185	+13

[1]Selected group of large manufacturer-wholesalers and chocolate manufacturers report sales by type of product. Companies reporting such detail account for approximately half of the total dollar sales of manufacturers.
[2]Includes penny goods.
[3]Less than 0.5 percent change.

Data from monthly *Current Industrial Reports* of U.S. Dept. of Commerce

THE MANUFACTURING CONFECTIONER, Volume XLI, No. 11, November, 1961. Published monthly by The Manufacturing Confectioner Publishing Company. Executive offices 418 North Austin Boulevard, Oak Park, Illinois. Telephone Village 8-6310. Eastern offices: Box 115 Glen Rock, New Jersey. N. Y. City telephone Bowling Green 9-8976. Publication Office: 1309 N. Main Street, Pontiac, Illinois. Copyright, 1961 Prudence W. Allured, All Rights reserved. Subscription price U.S. & Canada, $3.00 per year, $5.00 for two years. Individual copy 50¢. Foreign Subscription prices, $7.00 per year, $10.00 for two years. Send form 3579 to 418 North Austin Boulevard, Oak Park, Illinois. Second-class postage paid at Pontiac, Illinois.

For Old Time Favorites

modern resinous glazes

Wm. Zinsser & Co., has been making confectionery glazes ever since such old-time favorites as jelly beans, butter creams and candy corn were new-fangled delights. And through the years Zinsser has developed new and improved resinous glazes that give these favorites maximum protection and sales appeal. Here is the broad line of Zinsser glazes to meet your requirements.

Regular glaze – full-bodied, opaque, creamy solution. Gives a clear film.

Refined glaze – wax-free, transparent, amber-colored solution. Gives a crystal clear film, more brilliant than Regular.

Orange glaze—color of conventional liquid orange shellac. Gives an unusual "toning" effect on dark chocolate pan goods.

Available in 3-lb., 4-lb., and 5-lb. cuts with 28.8%, 34.9% and 39.9% dry solids respectively, or your special formulae.

Zinsser quality controlled glazes assure—smoothness of film . . . freedom from residual odor . . . consistent viscosity for uniform holdout . . . excellent color retention . . . purity . . . uniform wax dispersion.

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to the over-all responsibilities of operating the business.

Musser joined Klein Chocolate in 1941. He is well known throughout the industry for his technical ability. He is chairman of the research committee of the Pennsylvania Manufacturing Confectioners Association, a member of the technical committee of the Chocolate Manufacturers Association, and a member of the research committee of the National Confectioners Association.

Food industry to have science school

Three prominent suppliers to the food industry have joined forces to sponsor a series of seminars for the advancement of the food sciences. The seminars, to be organized by Rutgers, the State University, will be held at Asbury Park, N. J.

Beginning January 14, the first seminar will consist of six days of lectures by authorities from government, universities and industry.

Topics to be covered include: chemistry and bacteriology of foods, foods and nutrition, methods of preservation, food spoilage and food poisoning, quality control methods and examination, flavor evaluation, food additives and regulations, economics of marketing a new product, food advertising and consumer acceptance.

Future seminars on food products, food engineering, and food packaging are planned and will be presented at six month intervals.

The seminars will provide a thorough grounding in fundamental concepts of food science as it relates to processing and handling of food. Also the seminars are being designed to show how to discover, evaluate and apply advanced techniques which will improve product quality and sales.

Complete information about this unique program can be obtained from Dr. Edward A. Nebesky, Department of Food Science, Rutgers, the State University, New Brunswick, N. J.

ARC will hold three merchandising/production conferences

In 1962, "How to Beat the Cost Squeeze" will get full play at three regional merchandising and production conferences of the Associated Retail Confectioners of North America.

Beginning January 12 and running for three days, the

(*Continued on page 53*)

NCA Convention leaders meet; lay plans for 1962 meeting

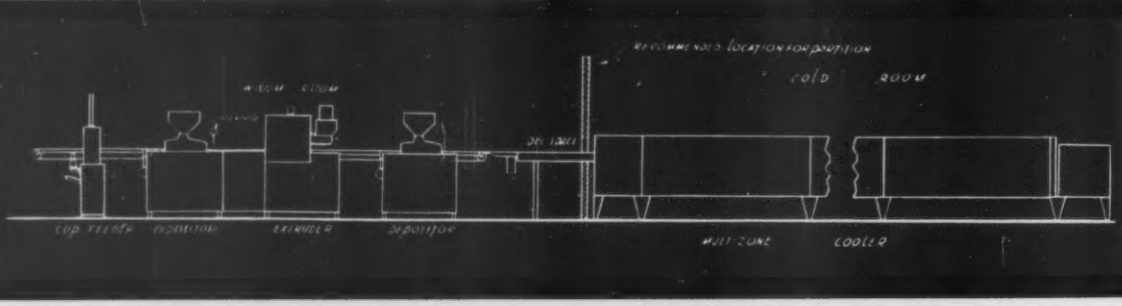
Following the appointment of committee chairmen and co-chairmen for the 1962 National Confectioners Association Convention (announced last month in The Manufacturing Confectioner) the group gathered for its first all-day session in mid-October to lay plans for the 79th Annual candy conclave scheduled for June 3-7, Conrad Hilton Hotel, Chicago.

On hand for the work session were (first row, left to right) **Duane Tiger,** the Hubinger Co., and **Samuel C. Miller,** Peerless Confection Co., dinner dance committee co-chairman and chairman, respectively; **George H. Olsen,** Corn Products Sales Division, general convention co-chairman; General Convention Chairman, **James A. Dickens,** Williamson Candy Co.; **Mrs. Nello V. Ferrara** and **Max L. Gartner,** Fascination Candy Co., Inc., ladies' entertainment committee co-chairman and chairman, respectively; and **Douglas S. Steinberg,** NCA president.

Also present were (second row, left to right) **William J. Lavezzorio,** Peanut Specialty Co., and **John W. Hoermann,** M. J. Holloway & Co., publicity committee co-chairman and chairman, respectively; **Earl T. Oftedahl,** E. J. Brach & Sons, and **R. N. Rolleston,** Williamson Candy Co., golf committee co-chairman and chairman, respectively; **Nello V. Ferrara,** Ferrara Candy Co., and **Adolph V. Stankus,** Merckens Chocolate Co., Inc., Sunday get-together committee chairman and co-chairman, respectively; **Aron Levitas,** Ambrosia Chocolate Co., and **Herb Knechtel,** Knechtel Laboratories, allied industries' entertainment committee co-chairman and chairman, respectively; **Sam Shankman,** Leaf Brands, Inc., program committee co-chairman; and **Frank D. Register,** assistant secretary, NCA.

Committee heads who do not appear in the photograph are **A. Fred Rathbun,** Fred W. Amend Co., program chairman; **Charles V. Lipps,** The Curtiss Candy Co., policy chairman; **David P. O'Connor,** Penick & Ford Ltd., Inc., and **Charles C. Broeg,** The Nulomoline Division, American Molasses Co., exposition chairman and co-chairman, respectively; and **Edward N. Heinz, Jr.,** Food Materials Corp., and **G. Lloyd Latten,** Macon, Ga., chairman and co-chairman, respectively of the joint program of NCA and the American Association of Candy Technologists.

GREER IDEAS



Schematic of Greer-Racine Cup Processing Line showing left to right Cup Feeder, Racine Depositor, Racine Extruder, Racine Depositor, Multi-Zone Cooler.

for CUP PROCESSING

The Greer-Racine Cup Processing Line provides high-speed continuous production of cupped confections, and requires no labor beyond preparation of material. A 34" Greer-Racine Line can produce 500 2"-diameter pieces per minute, in paper cups ready for wrapping or packaging. This volume production is achieved at low cost.

The system is complete, available from one source, and handles a variety of products including cream, marshmallow, peanut butter and coconut centers, available in 34" and 16" width. To learn how this system can increase your cup production efficiency, please contact Greer at your earliest convenience.

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the Manufacturing Confectioner

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flavor of
Fudge

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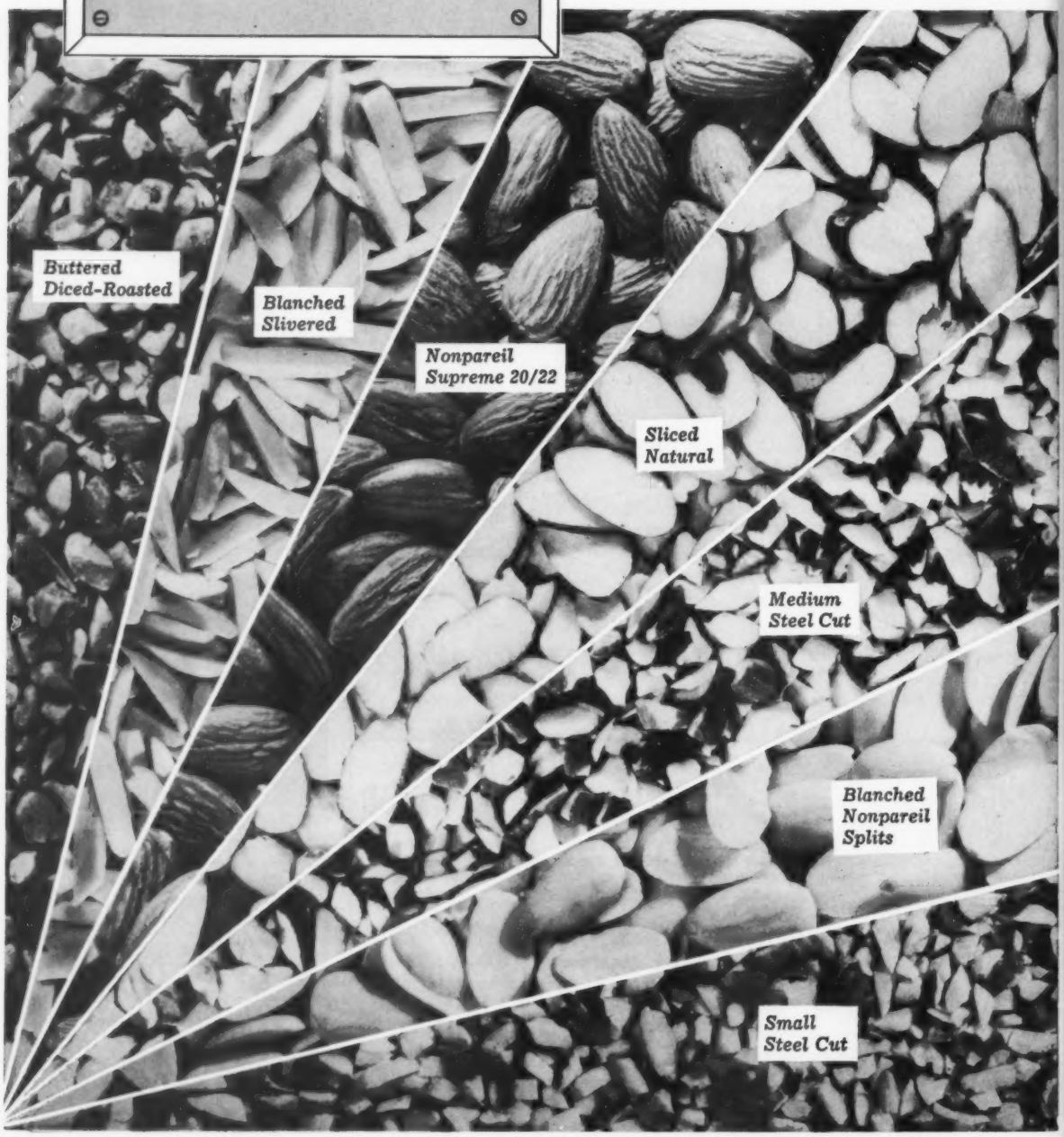


1961

The sweet and the sour

HIGH AMYLOSE STARCH

Supplies of a genetically modified corn starch of high amylose content are available for commercial use. This development has been in the making for several years, awaiting only the gradual multiplication of quantities until enough seed was available for mass planting. This fall the harvest of this special corn will make available several million pounds of this unique starch, a quantity that the makers feel will supply all demand.

The significance of this development lies in the character of amylose. Corn starch contains two types of starch, amylose and amylopectin. All of the gel strength of the starch comes from the amylose fraction, which constitutes 28% of regular starch. The new genetic strains of starch grow with 55% to 60% amylose. At least in theory, these new starches should have twice the gelling power, or about the same gelling power from half the quantity.

Two firms have cooperated in this genetic development, and are now offering a high amylose starch. They are National Starch with Amylon, and American Maize Products with Amylomaize. At this point, a really complete job of evaluation of this new starch for starch gum candies has not been made. Both companies have extensive product development programs under way, though it seems that so far candy is only "potential" rather than actual.

One of the problems is that this starch is almost impossible to gelatinize at the temperature of open kettle cooking. However, high temperature pressure cookers such as the Votator and Farley will do an adequate job.

The presence of sugars also tends to slow the gelatinization. It may be that this starch will have to be cooked first in straight water until gelatinized, and then mixed with a syrup and cooked again to gain a final desired moisture level.

This is the most interesting development in starch gums since the continuous cookers were introduced about ten years ago.

TALK ABOUT CANDY

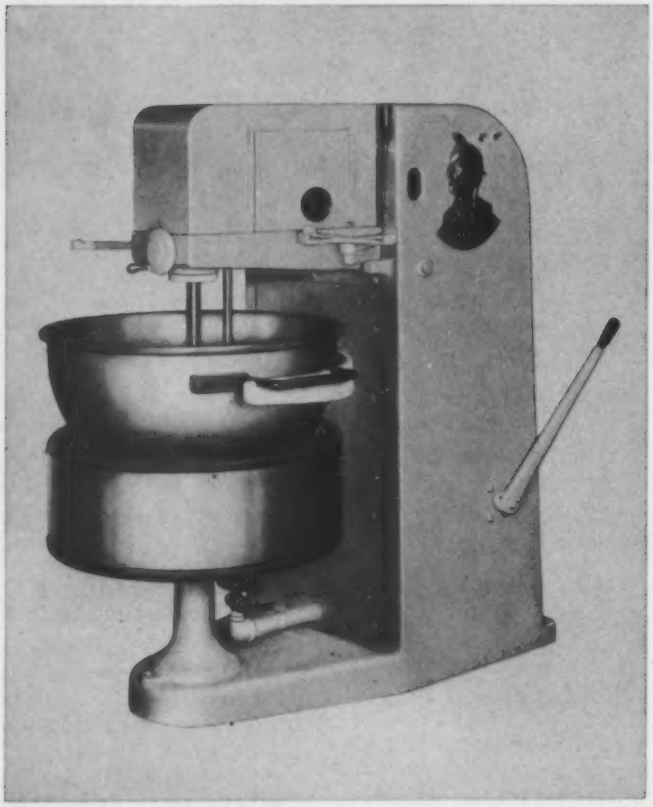
One of the projects of the Candy, Chocolate and Confectionery Institute which we feel is particularly noteworthy is the recent publication of "Straight Talk about Candy and Chocolate". This pocket-size, 20-page booklet discusses the subjects of dental caries, weight control and nutrition, and the effect of sweets on skin blemishes.

I suspect that most members of the candy industry learn rather quickly in their business life that there is little to be gained in giving direct answers to food faddists who condemn processed foods—and particularly denounce refined sugars—as cause for all the health problems of the world. The "soft answer that turneth away wrath"

SAVAGE LATEST FIRE MIXER

MODEL S-48

Thermostatic Gas Control–Variable Speed



The Savage Latest Fire Mixer, Model S-48, is Streamlined and Sanitary and has many new features and conveniences:

Automatic Temperature Control
Variable Speed from 30 to 60 RPM
Break-back within floor space 32" x 48"
Aluminum Base and Body Castings
Atmospheric Gas Furnace with Stainless shell
Removable Agitator, single or double action
Stainless Cream Can and Stainless Drip Pan
Copper Kettle 24" diameter 12½" deep or 16" deep

You can save labor and obtain uniform batches by setting the thermostat for degree cook desired. It cooks and mixes batches of caramel, peanut brittle, peanut candies, fudge, nougat, gum work, and with double action agitator is ideal for coconut candies and heavy batches.

Your inquiry invited

SAVAGE BROTHERS COMPANY

2638 Gladys Ave. **Chicago 12, Ill.**

is a far more productive tack simply because any amount of scientific argument is far over his head, and he is suspicious of what the experts say.

In some cases, however, it can prove very helpful to have some basic scientific facts on which to lean when discussing this industry's position in the field of human nutrition. These discussions may arise with the family physician or dentist, or with business or social acquaintances, who though full of detailed knowledge of his own specialized field, may be nearly as full of misconceptions concerning candy as the wildest faddist.

This booklet, very properly does not claim impartiality or a completely objective approach. And it does not claim to discuss these subjects with definitive thoroughness. However, the information given is certainly accurate enough, and when taken with a bit of salt can be very effective in "educating" the unknowing persons concerning professional opinion of candy's proper place in the diet, both from the standpoint of dental caries and weight control.

The booklet is available from the CCCI, 119 West Wacker Drive, Chicago 1 at 10¢ per copy.

TRICK OR TREAT

Out of the "trick-or-treat" tradition has grown an interesting development at the Glencoe, Illinois school system. The morning following Hallowe'en, that portion of the candy "loot" not yet consumed, and which is individually wrapped, is brought to the school. Student council members box this candy for delivery to orphanages in the area.

This, of course, is an excellent example of an attempt to give a moral basis to this essentially acquisitive action. It also, incidently, gets a lot of candy out of the hands of children who can afford to buy it, into the hands of those who cannot; sending the former back to the candy store much sooner than they otherwise would.

We can expect this idea to receive widespread industry support in years to come.

FRITZSCHE
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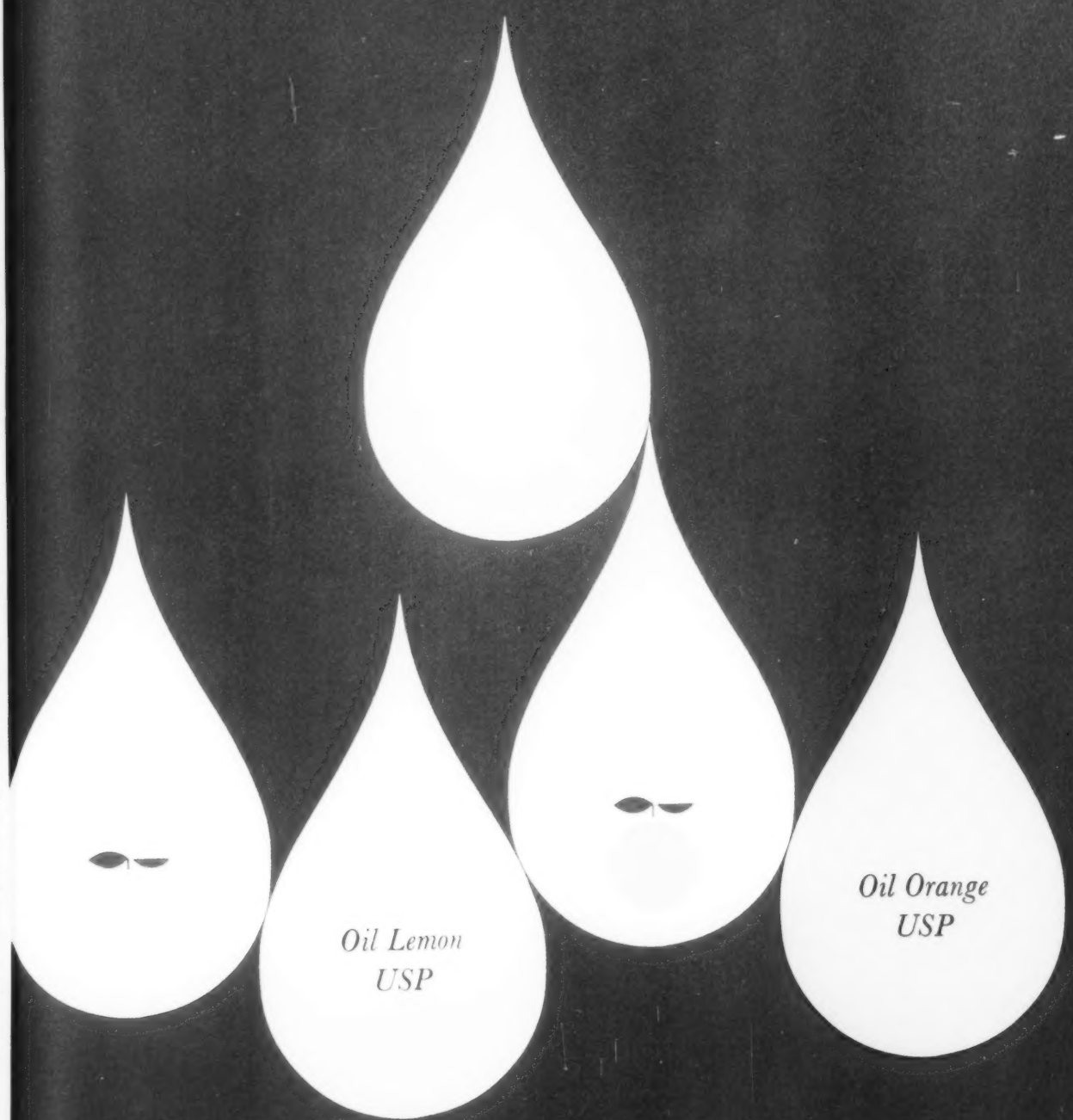

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... Look for the hal lity as il

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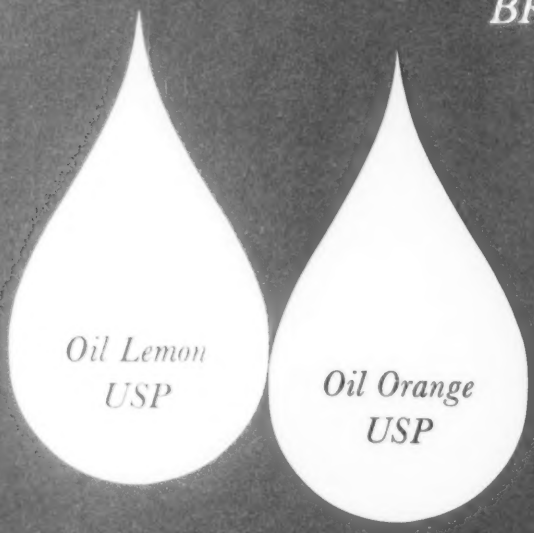
hability as illustrated here . . .

CITRUS VALLEY

BRAND



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in any quantity,
with more reliable delivery.

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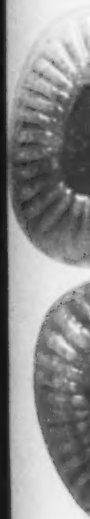
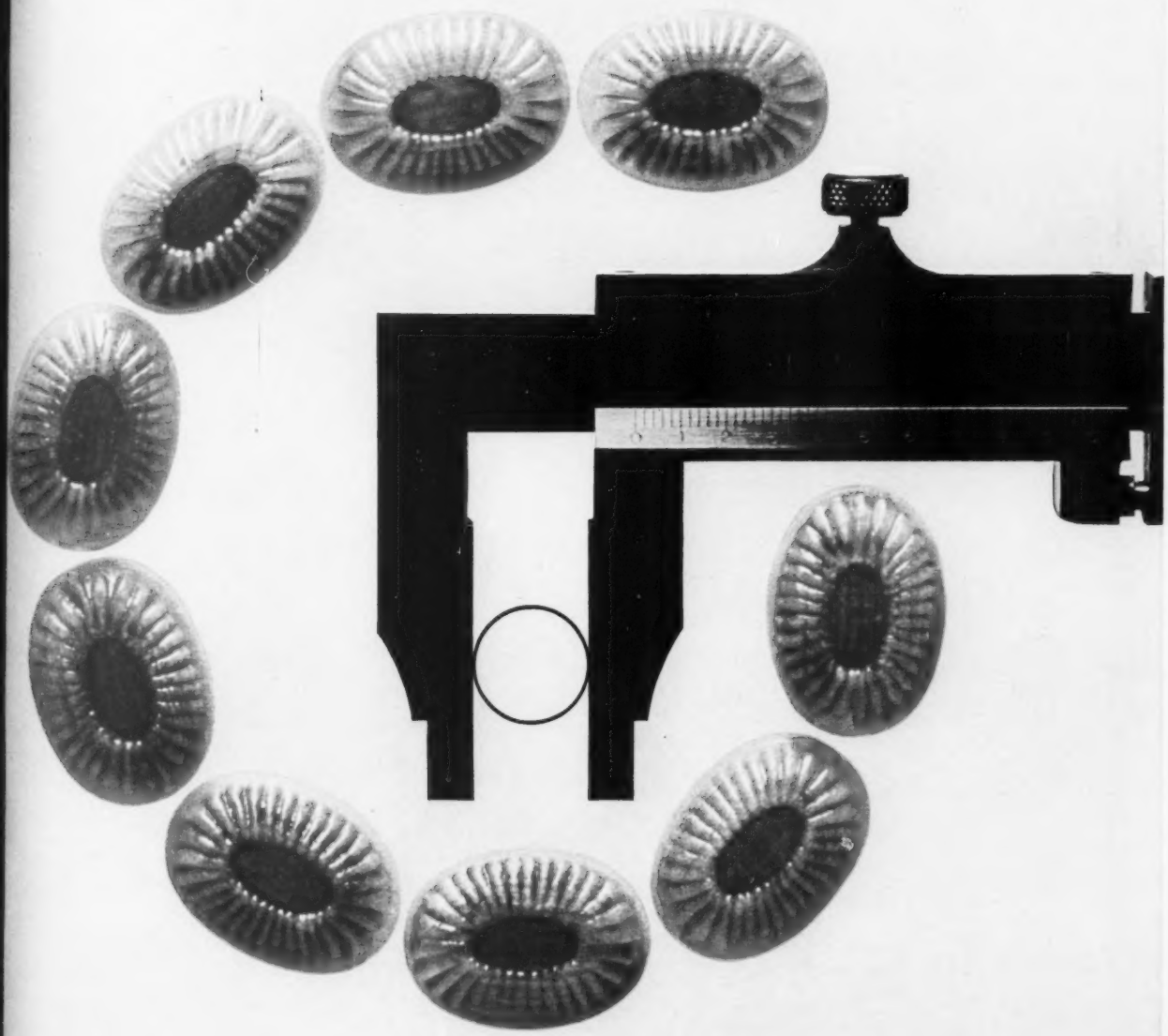


The Correct Rope Diameter

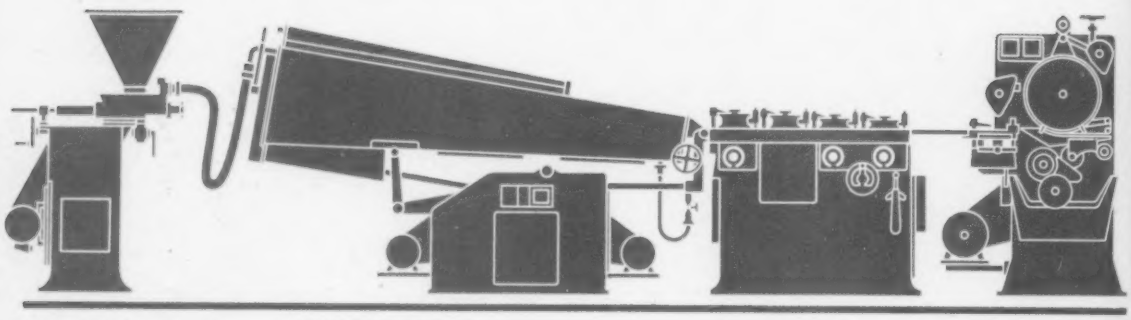
is one of the most important factors in producing dimensionally correct hard boiled candies, caramels, or toffees. The rope diameter influences quality control and only a correctly sized rope will result in maximum efficiency on modern forming and wrapping machines. The Hansella Batch Former and Rope Sizer units type 19 and 65 are capable of producing up to 300 feet of uniform candy rope per minute with or without centers. We will be pleased to send you full information and will gladly place our experience at your disposal.

Hamac-Hansella

Hamac-Hansella Machinery Corp. Grand & Ruby Avenues Palisades Park, N.J.



The fully automatic »Uniplast« Plant
for the manufacture of highly filled seamless candies



Centre Filler
Type 27

Batch Former
Type 19

Rope Sizer
Type 65

Universal
Plastic Forming
Machine
»Uniplast«
Type 160

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Düsseldorf	Hamac-Hansella-Sapal Vertriebsges.mbH.	Berliner Allee 61
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Palisades Park N.J. / USA	Hamac Hansella Machinery Corp.	Grand & Ruby Avenues

FLAV
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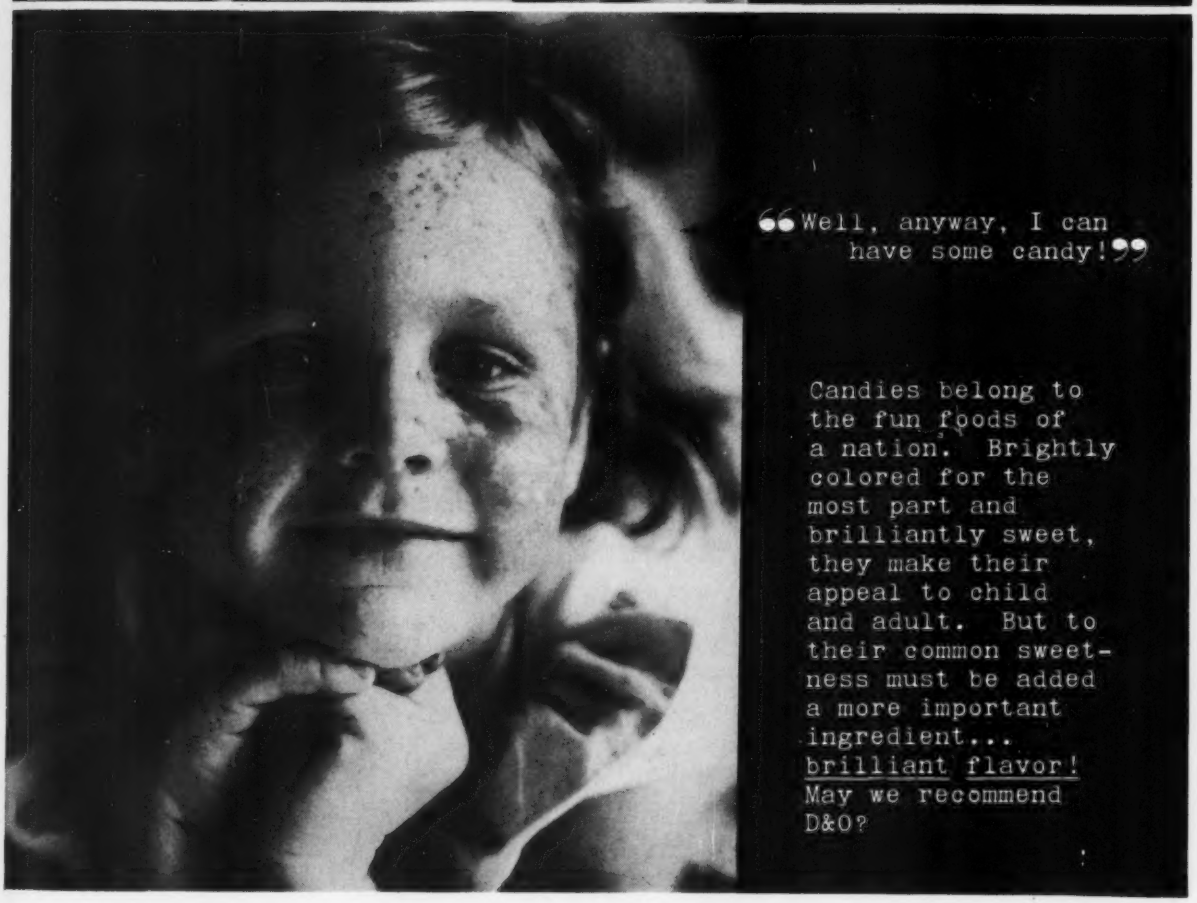
The M


"Well, anyway, I can have some candy!"
Candies belong to the fun foods of a nation. Brightly colored for the most part and brilliantly sweet, they make their appeal to child and adult. But to their common sweetness must be added a more important ingredient... brilliant flavor! May we recommend D&O?

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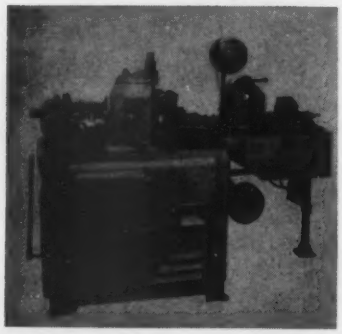
There's profit in pops when you use the Latini

Conservatively, 100 boxes per hour* of 120 count

A second Latini unit can be operated by the same person

*based on a 30-minute hour

Latini Die Pop Machine with Wrapping Attachment



225 Pops formed and wrapped per minute. No handling between forming and wrapping. Eliminates breakage and labor.

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- Handles all-free flowing nuts.
- 2 more clusters per row.
- All stainless-steel construction
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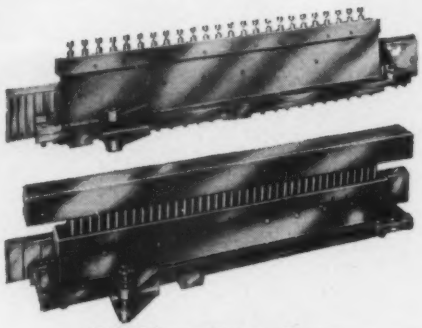

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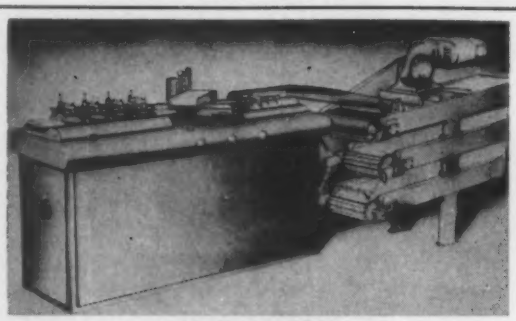
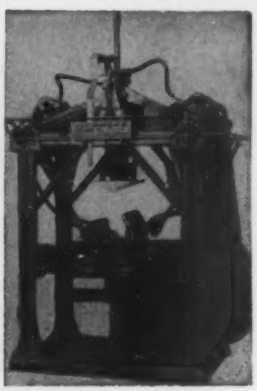
Faster, better, and more accurate due to precision workmanship. Water-sealed—Sanitary—No grooves—No washers.
Available in all sizes.
Single, double, triple and quadruple row for all depositors.
Also available—Special Chocolate Pump Bars—Sanitary stainless steel hoppers.



STICK-MASTER

Integrated Sizer & Twister with electronic speed control.
Flexible — Diameters for ¼" to 1½"; length from 4" to 16".
Productive — up to 1500 inches per minute.
Sanitary — Stainless steel finish — Candy always in sight.

BERKS HARD CANDY MIXER



Mixes color, flavor and acid in 75 to 125 pound batches at rate of 1000 lbs./hr., 10% scrap may be included. Saves labor and floor space. Assures uniform mixing and constant rate of production through the day.

Representative: *John Sheffman, Inc.*

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You bet we do. Just
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if we don't stock it as a staple item,
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FRUITOSYNTH FLAVORS

EXTRA CONCENTRATED IMITATION FLAVORS

Created by Nature DUPLICATED BY Florasynth

These are manufactured from the highest quality Essential Oils and Aromatics blended with natural fruit and plant extractions. They are very highly concentrated and are useful for many purposes.

Detailed information for their use and for the amount of solvent required to make flavors and flavoring extracts will be gladly furnished on request.

Apple	Grape, Concord
Apricot	Grapefruit-Pineapple
Banana	Grenadine
Blackberry	Huckleberry
Canteloupe	Loganberry
Cherry, Tame	Maraschino
Cherry, Wild	Orange-Pineapple
Cranberry	Passion Fruit
Currant, Black	Peach
Currant, Red	Pear
Fig	Pineapple
Gooseberry	Raspberry
Grape, Cal.	Strawberry

DIRECTIONS FOR USE

Soft Centers	½ - 1 oz. to 100 lbs.
Hard Candies	1½ to 2 oz. to 100 lbs.
Syrups	1 - 1¼ oz. to 10 gals.
Nectar Bases for Summer Drinks	½ - 1 oz. to 1 gal.
Flavoring Extracts & Non-Alcoholic Flavors	6 - 8 oz. to 1 gal.
Household Extracts	1 - 2 oz. to 1 gal.

samples and prices on request

IMITATION CANDY FLAVORS

CONCENTRATED IMITATION CANDY FLAVORS No. 12

Specially prepared to resist high temperature in the manufacture of hard candy.

- Highly concentrated and of excellent taste and aroma.
- Utilize from 1½ to 2 ounces to the 100 pounds of hard candy,
- Or ¾ to 1 ounce to 100 pounds of soft goods.

Apple	Currant (Black)	Pineapple
Apricot	Currant (Red)	Pistachio
Banana	Grape	Plum
Blackberry	Grape (Concord)	Raspberry
Butter	Grenadine	Root Beer
Butter Scotch	Honey	Rum and Butter
Cherry (Tame)	Loganberry	Strawberry
Cherry (Wild)	Peach	Tutti Frutti
Coughdrop	Peach Blossom	Walnut (Black)
Cranberry	Pear	Walnut (English)

samples and prices on request

CONCENTRATED IMITATION CANDY FLAVORS No. 8

We can supply these in all of the different types of Flavors indicated under heading of Concentrated Candy Flavors No. 12. They bear the same concentration as the No. 12 line.

samples and prices on request

SUPERFINE CONCENTRATED IMITATION HARD CANDY FLAVORS

We also offer a specially prepared line known as "Superfine Concentrated Hard Candy Flavors" for high grade candies consisting of the same types of flavors listed under our No. 12 line. Use 1½ to 2 ounces to 100 lbs. of Hard Candy.

samples and prices on request

CITROSYNTH OILS

CITROSYNTH LEMON OIL • CITROSYNTH LIME OIL CITROSYNTH ORANGE OIL

All three CITROSYNTH OILS are not imitation oils, but are blends of the corresponding Lemon Oil, Lime Oil and Orange Oil with other natural oils to give excellent duplication as to both flavor and strength to achieve outstanding replacements for Lemon Oil, Lime Oil and Orange Oil respectively on a 100% basis. CITROSYNTH OILS are superb compounds of natural oils which retain the inherent goodness and richness of the natural product. Samples and Prices on request.

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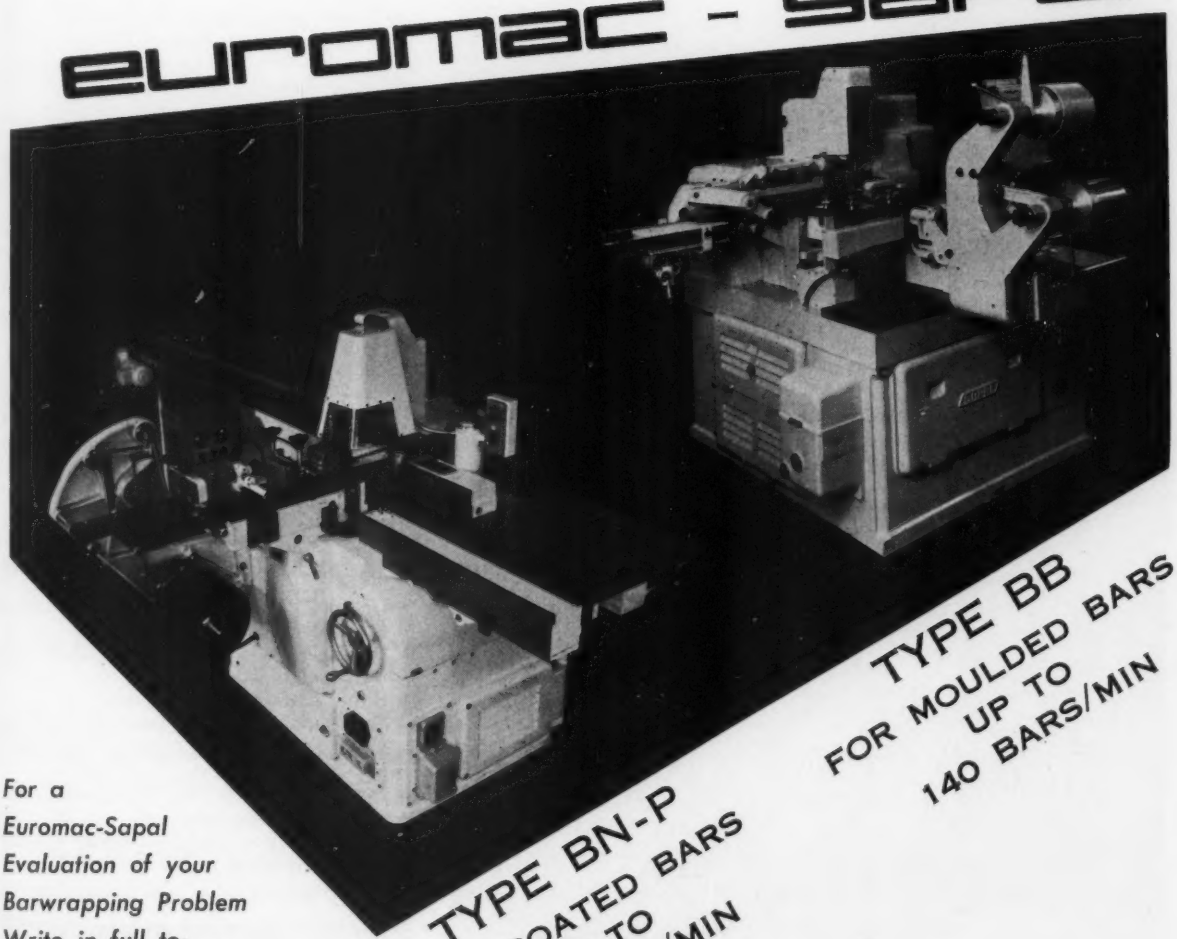
HIGH SPEED BAR WRAPPING

euromac - sapal



TYPE BB
FOR MOULDED BARS
UP TO
140 BARS/MIN

TYPE BN-P
FOR COATED BARS
UP TO
180 BARS/MIN

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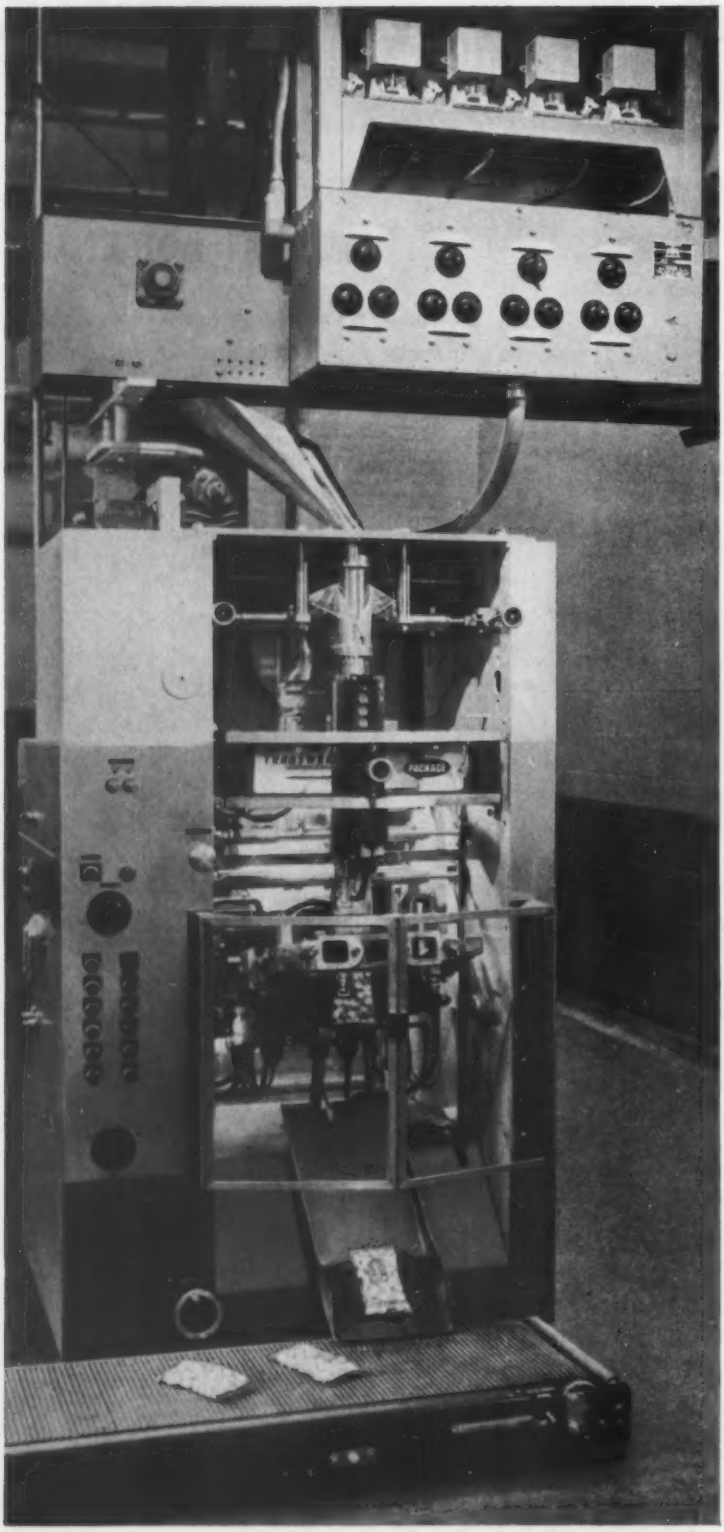

TRANSWRAP S-750 GIVES NECCO HIGH-SPEED AUTOMATIC PACKAGING

On their Canada Mint packaging operation, New England Confectionery Co. now automatically forms, fills and seals 9-oz. polyethylene bags on a Package Transwrap S-750. Sustained production rate for the 4⅝" x 8½" bags is 60 a minute.

NECCO gets high-speed operation and flexibility of bag sizes and materials with its Transwrap. The machine runs virtually unattended, and the net weight scale feed maintains extremely close accuracy. Their 6-oz. and 8-oz. mint packages are planned for this unit in the near future.

If you're interested in the benefits of high-speed automatic operation, call your Package representative. He will be glad to explain how the Transwrap S-750 can help you produce a smarter package, faster and at lower cost.

The Package Transwrap S-750 offers these cost-cutting features that mean speed, flexibility and efficiency to any packaging operation:

- Wide size range—bags 3" to 15" long, 2" to 8½" wide.
- Up to 75 bags a minute with a single tube; easy speed adjustment.
- Handles a wide variety of plastic and heat-sealable films.
- Rapid film and size change-overs.
- Smooth, straight pull on material, even at high speeds, by spring-counterbalanced, crank-operated drawbar.
- Improved paper feed operates faster, eliminates film distortion.
- Tight, positive impulse sealing of ends and longitudinal seam.

In addition to Canada Mints, NECCO plans to use the Transwrap to package other candy products in both polyethylene and cellophane bags.

PACKAGING IS PART OF YOUR PROFIT PICTURE

PACKAGE MACHINERY COMPANY, EAST LONGMEADOW, MASS.

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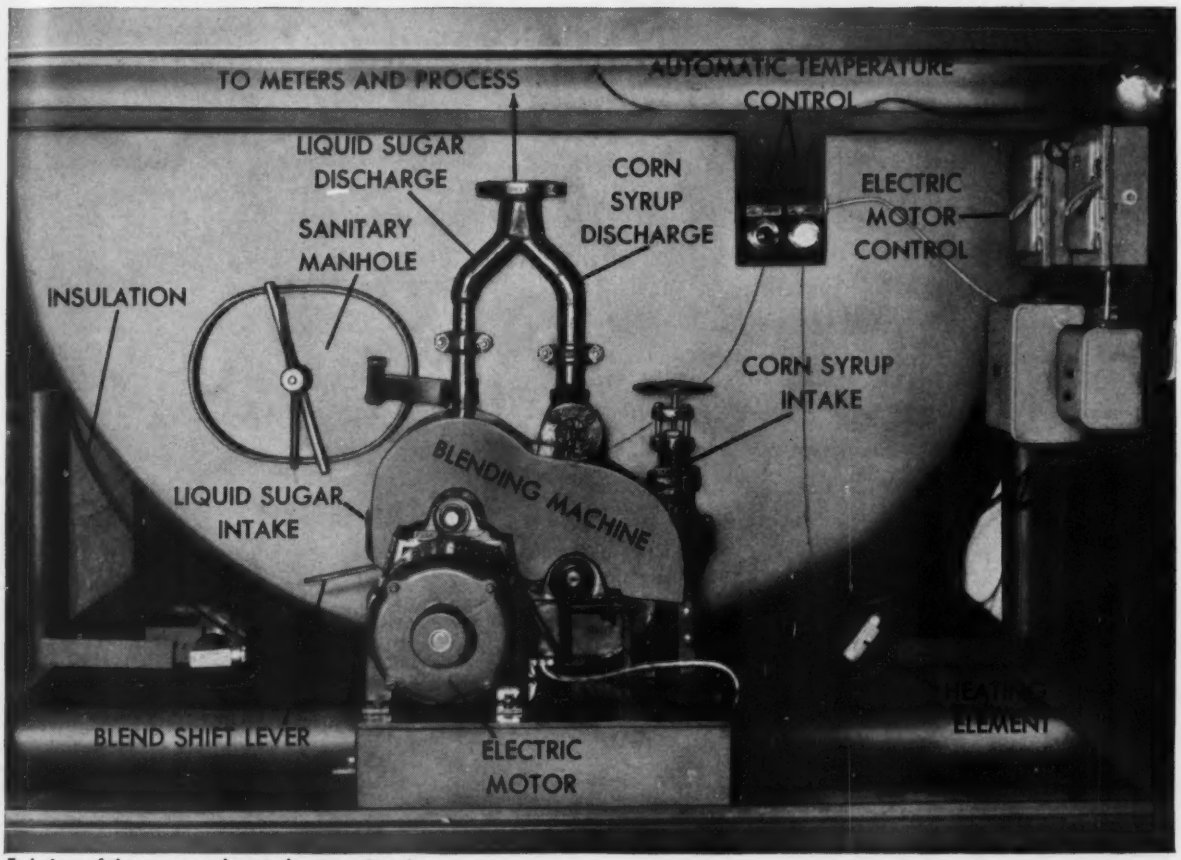
PACKAGE

What do you need in a sweetener blend? 90-10? 70-30? 50-50? Somewhere in between? This ONE UNIT supplies them all.



End view of the pump and controls compartment.

...it's Staley's STABLEND Storage and Blending Unit

- Stores, pumps and blends liquid sugar and STALEY'S CORN SYRUP in *any ratio* you desire—with pin-point precision.
- Affords unequalled flexibility and speed in production changeovers.
- Eliminates the necessity of having a storage tank for each blend.
- Often enables you to take advantage of sugar price fluctuations—impossible to do with preblended mixtures.
- Developed by Staley engineers who have a reputation for leadership in the field of bulk handling, the STABLEND Unit is not sold for profit, but for the sole purpose of benefitting customers who use Staley's Corn Syrups.

Why not look into the many advantages Staley's STABLEND Storage and Blending Unit can bring to your operation. For further information and performance data, MAIL COUPON BELOW.

Staley

A. E. Staley Mfg. Co. **MF-111**
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Please send me complete information on Staley's STABLEND Storage and Blending Unit.

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It's selling force for your candy — resulting from the creative Milprint blend of skill, experience, widest selection of packaging materials and printing processes . . . to produce packaging that's custom-built to your marketing specifications, at economical cost.

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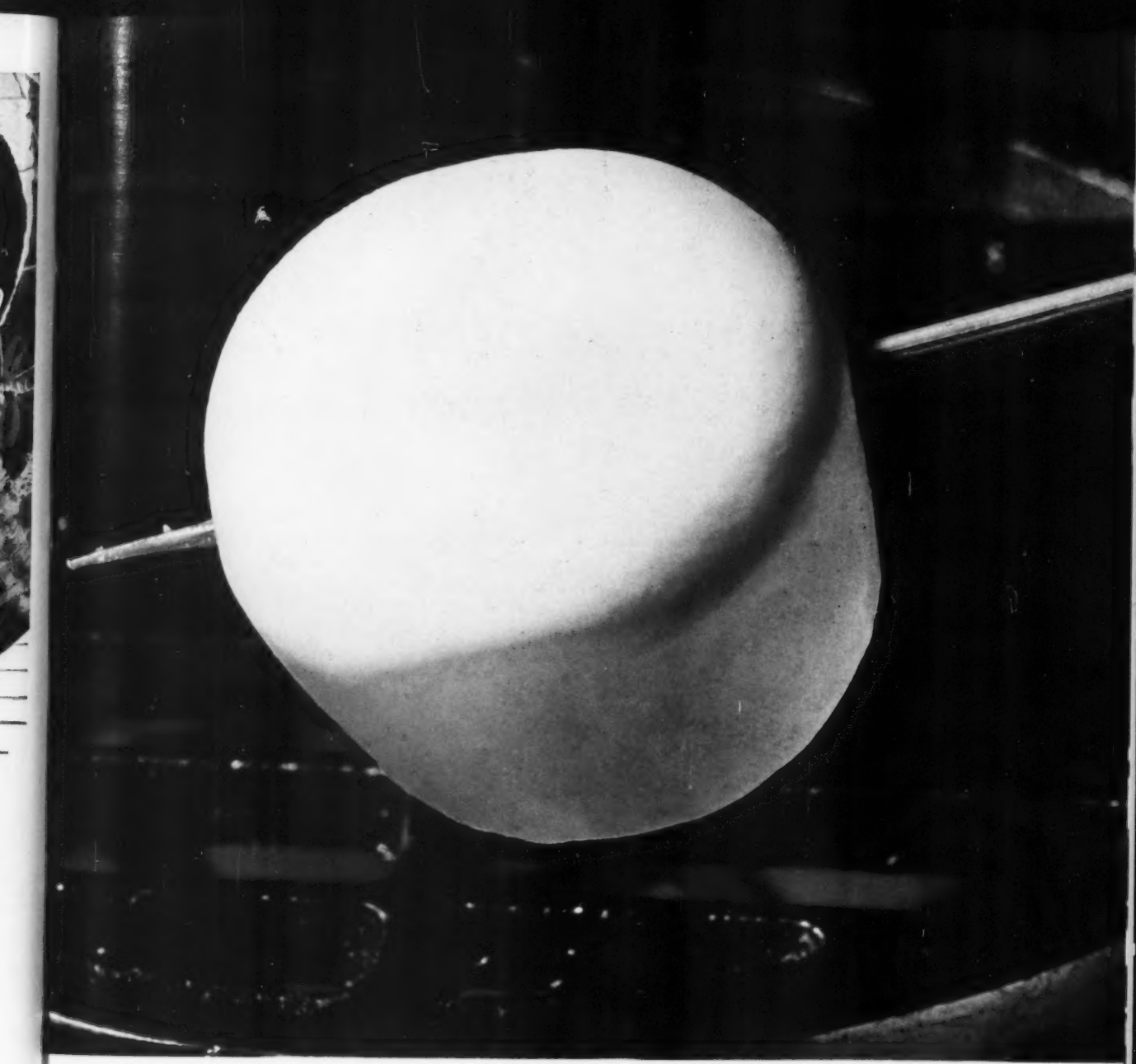

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taste and shelf life, use...

REX®, GLOBE®, MOR-SWEET®
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BRIGHT BOTTOMS

mean faster selling candies!

and here are two BURRELL Belts to give you the *Brightest* Bottoms...

★ **BURRELL MIRAFLEX COOLING TUNNEL BELTS**

for the highest possible gloss and minimum stretch

This Burrell-built Belt is made with 3 mil DuPont "MYLAR"* surface. It gives bottoms a mirror shine that is unequalled by any other Belt. "Miraflex" has great tensile strength, and remarkably high dimensional stability—it has very low stretch even under severe operating conditions. Yet its flexibility is excellent. Impervious to attack by grease or food acids, solvents and moisture, "Miraflex" is easy to keep clean and serves efficiently during a long life.

*DuPont's trademark for their brand of polyester film

This highly popular Burrell-built Belt is in wide use in candy plants throughout the country. Its vinyl surface gives excellent brightness to bottoms, and in addition provides unexcelled transfer properties. The resistance of "Miragloss" to abrasion is remarkable, which adds both to Belt life and ease of cleaning; and "Miragloss" users have little worry about cracking or checking, since this Belt stands head and shoulders above ordinary types in flexibility. Both "Miragloss" and "Miraflex" are odorless and stain resistant, and are easy to splice.

BURRELL MIRAGLOSS COOLING TUNNEL BELTS ★

for superior gloss with top flexibility, exceptional transfer

AND FOR PACKING TABLE OR VIBRAPAK—"Miragloss" is the ideal Belting; when you use this unusual Belt at this critical point in the production line, you are sure of retaining the glossy brightness which "Miragloss" or "Miraflex" has given your chocolates, to send your products to market in the finest saleable condition. Single texture "Miragloss" is the choice for VIBRAPAK; double texture "Miragloss" is recommended for the PACKING TABLE.

★ *BURRELL has concentrated on the special problems of confectionery, baking and other food product plants for many years. The design and construction of BURRELL Belts reflects this long experience. Materials used are the finest available to meet operating conditions, and to give proper length of service. And BURRELL excels in splicing methods, to make Belt applications simple and efficient. Put your Belting problems in expert hands—let BURRELL "know-how" and rapid service work for you.*

OTHER BURRELL SPECIALIZED PRODUCTS FOR THE CANDY PLANT

• Feed Belts • Batch Roller Belts
• Wire Belting • Caramel Cutter Boards
• "Reflecto" Cooling Tunnel Belts • Plaques
• Packaging Table Belts

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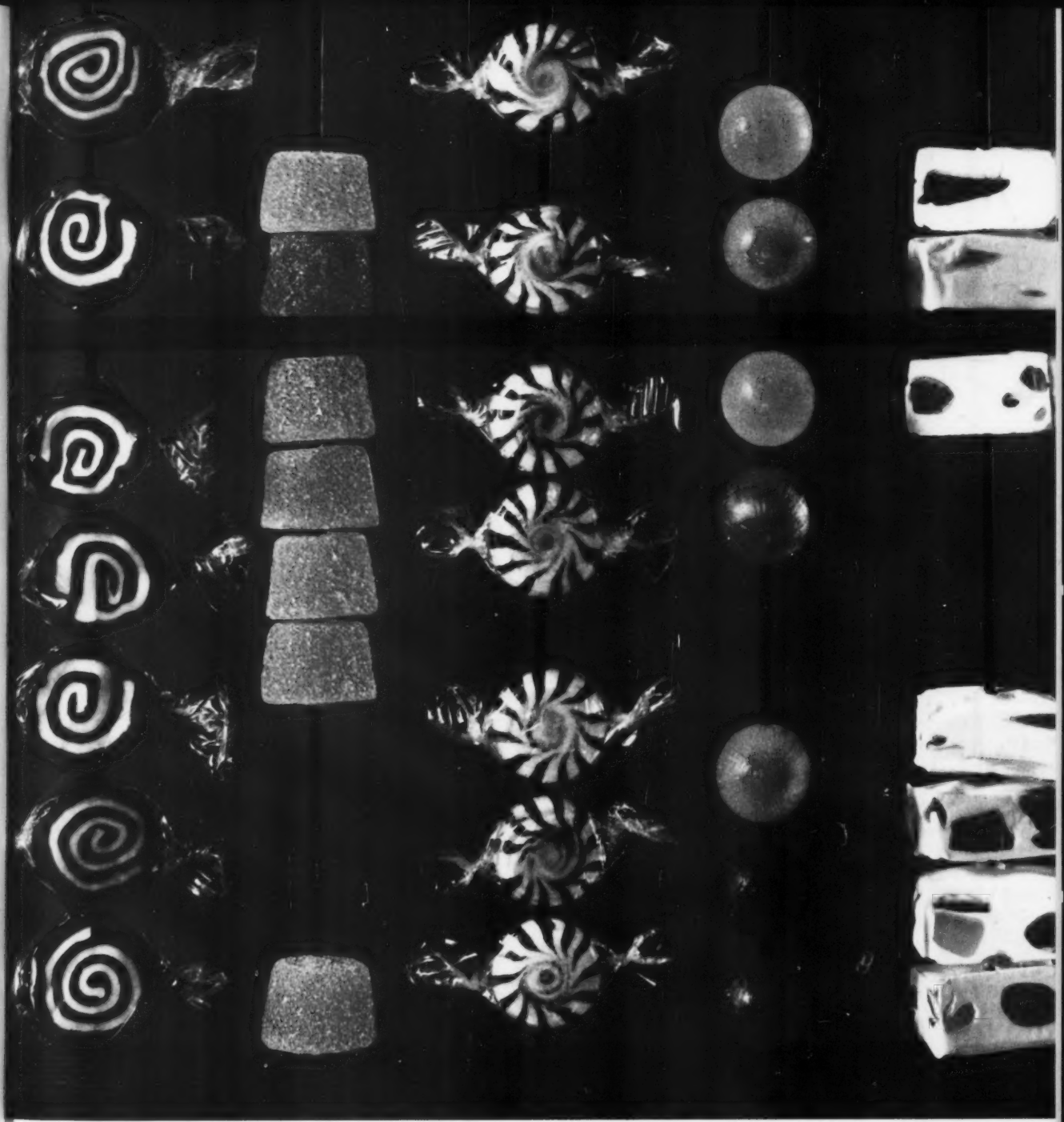

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How long has it been since you've taken a close look at the colors you are buying? Chances are excellent that the man from Stange can make color do a better job for you in your finished product. You see, Stange technicians have the know-how to make color serve food, bottling, and candy processors better. The Stange technician will be glad to make a color analysis in co-operation with your technical or production staff. Put Stange's years of experience to work for you.

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by Stroud Jordan and Katheryn E. Langwill

This volume, first published in 1946, is still the only published reference work on the subject of confectionery analysis. It concerns itself with applicable data that covers composition of basic raw materials as well as that of the finished confections in which they have been employed.

116 pp. – $6.00

Confectionery Problems

(Confectionery Studies, Number 1)
by Stroud Jordan

Stroud Jordan's reputation as an important candy technologist is based on this his first book. Published in 1930 it is still, in many areas, the final word on technology in the industry. Jordan's sense of responsibility to record his discoveries and knowledge for the benefit of the industry caused him to produce more writings on the technical and scientific aspects of candymaking than any other person in the field. The recognition given him in the form of the establishment of the Stroud Jordan Medal by the American Association of Candy Technologists rests on this sense of responsibility.

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A Textbook on Candy Making

by Alfred E. Leighton

Here is a textbook where the reader can learn the basic fundamentals of candy making, the "how" and "why" of the various operations in non-technical terms. Particular attention is given to the function of raw materials, and why each is included in a formula.

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Choice Confections

by Walter Richmond

This book, now in its second printing, is written primarily for the manufacturing retailer. It contains 365 formulas given in two batch sizes, one for hand work and one for machine work. All of these formulas have been production tested and have proven to be of great help to manufacturing retailers in varying old items and developing new ones. The book also contains a glossary of candy terms and chemical terms, a complete chapter on chocolate coating methods and a chapter on ingredients and their uses. It is an important and useful book for all manufacturing retailers.

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Your Future Factory

by V. P. Victor, M.E., P.E.

A twenty page booklet contains the essentials of modern factory planning. It includes plant layout, process design, materials handling, building and structure, production line and financial planning. This is a reprint of the five part article which appeared in The Manufacturing Confectioner in 1958. Mr. Victor is well qualified to advise on factory layout since he has had considerable experience in such planning together with experience in design of candy machinery and process development. He is a consulting engineer with headquarters in New York City. 20 pp. – $2.00

Profits Through Cost Control

by Frank Buese and Eric Weissenburger

This material deals with the problems of cost control in candy plants including planning for profit. The emphasis is on planning operations so that a profit will be made, and in early detection of those factors which will adversely affect profit.

36 pp. – $2.00

How to Salvage Scrap Candy

by Wesley H. Childs

This booklet is a complete revision of the author's work "Modern Methods of Candy Scrap Recovery" published in 1943. A considerable amount of information has been collected since that time on methods and techniques of salvaging scrap candy. This booklet covers all types of candy, and gives many practical and economical ways of converting scrap candy into a useful form for re-use. 28 pp. – $2.00

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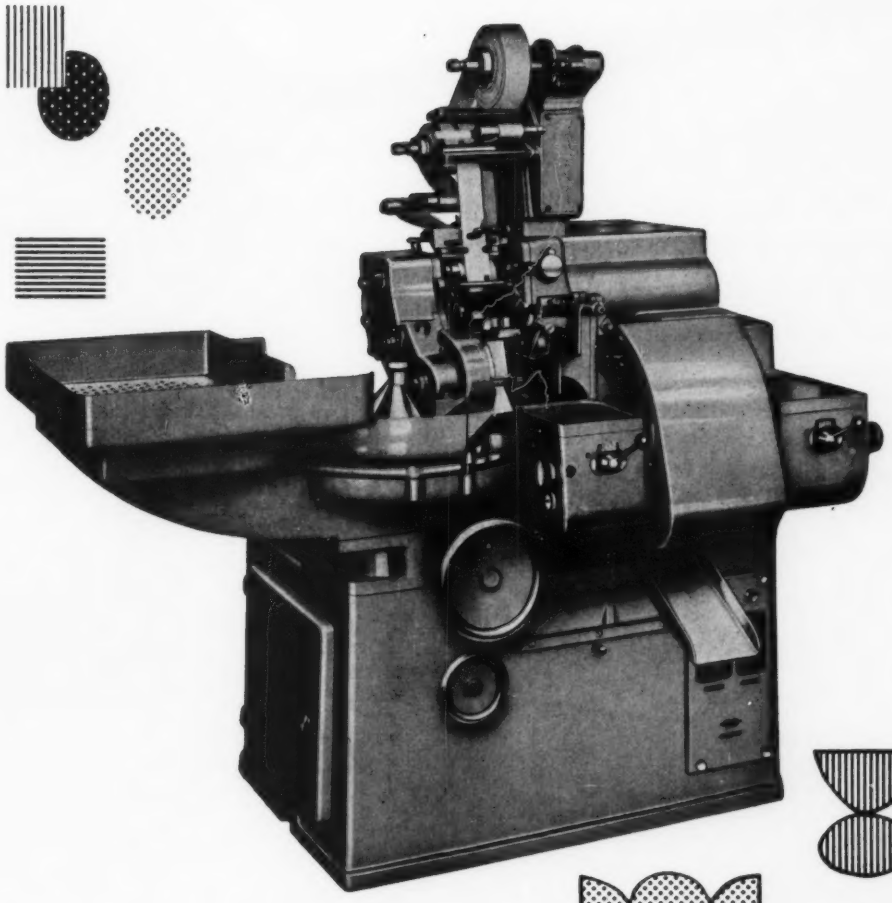

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- **exceptional efficiency with high filled sweet**

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Basic Facts for Candymakers—#4 of a Series

Basic Candy Ingredient—Invert Sugar

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WHAT IS INVERT SUGAR? Essentially, invert sugar is a mixture of two sugars, levulose and dextrose in equal parts. It is produced by hydrolizing (inverting) sucrose. During the process the larger sucrose molecule combines with a molecule of water and splits in half; resulting in two smaller molecules, one of levulose and one of dextrose. This mixture of levulose and dextrose has properties radically different from the original sucrose as well as all other sugars, common or rare.

Hygroscopicity

Invert sugar has the power of absorbing moisture from the air and of resisting drying out. This perhaps is the most important property of invert sugar and has led to its use as an inexpensive, moisture retaining ingredient for candies as well as for other foods such as cakes, cookies, biscuits, icings, marshmallow, pharmaceuticals, cosmetics, paper goods, adhesives, etc.

The actual amounts of moisture that will be retained by invert sugar after reaching equilibrium at various relative humidities are as follows:

% Relative Humidity	% Moisture Retained
80	33.5
70	26.5
60	20.2
50	14.5
40	9.8
30	7.0
20	5.2
10	4.0
0	3.0

Many months are required for invert sugar to reach equilibrium at the lower humidities, thereby affording excellent protection against drying out. Furthermore, invert sugar, once conditioned at a low humidity will immediately start to regain moisture when placed at a higher humidity. It is *truly hygroscopic* in nature.

Solubility

Invert sugar is more soluble in water than all other commonly used sugars, such as sucrose, either from cane or beets, or corn sugar (dextrose). Its solutions remain stable at a point somewhat above that concentration necessary to inhibit ordinary fermentation or mold growth. Thus, they are far less perishable than syrups made from the other sugars. Invert sugar also dissolves at a faster rate than cane, beet or corn sugar, which usually gives a shorter make-up time in preparing many formulations.

Resistance to Crystallization

Invert sugar crystallizes less readily than other sugars, and even after crystallization remains soft and smooth rather than like the hard, sharp crystals that characterize sucrose and dextrose. In addition, invert sugar acts to retard and modify the crystallization of many substances, thereby producing more concentrated solutions than would otherwise be possible. This property has long been employed by the confectionery industry; notably in the production of fondant and in high density cream centers, cordial cherries, fudges, caramels and other candies.

"Doctors" were used

Some confections withstand climatic conditions better than others, and in many cases this may be traced to the presence of invert sugar. Former generations of candymakers learned to use materials known as "doctors" to produce invert sugar while cooking a batch. Some of these "doctors" were citric acid, tartaric acid, acetic acid, and chiefly, cream of tartar. In most cases it was a secret process whereby the acids would split sucrose (sugar) into invert sugar (levulose and dextrose).

Even in the hands of an experienced candymaker erratic results or amounts of invert sugar were produced. He was unable to produce uniform products because of several factors; cooking time, final cooking temperature, amounts and the strength of the doctoring material, the amount of sugar and water and presence of inorganic materials in the sugar water or other ingredients.

Erratic system

Cook a batch of acid-doctored candy a little longer than usual and it is over-doctored; cook it fast and the candy will be under-doctored.

By using standardized invert sugar, chemical control is substituted for chemical action. A definite measured or weighed quantity of invert sugar will always produce the same uniform product. This is very important to the candymaker, large or small, in order to make candies of uniform consistency and high quality.

In order to demonstrate the value of invert sugar in candies each type of candy must be considered separately. We will give typical formulas for each classification of candy, pointing out the purpose of the invert sugar in each formula.

Caramels and Chewing Candies

All Purpose Caramels (Cut or Cast)	
25 lbs.	Corn Syrup
5 lbs.	Standardized Invert Sugar
20 lbs.	Cream (18% butter fat)
22 lbs.	Granulated sugar
3 lbs.	Hardened edible oil-92°
25 lbs.	Evaporated milk
1 oz.	Salt
	Flavor—as desired

Place the corn syrup, invert sugar, and 6 pounds of the cream into a caramel cooking kettle, add the sugar and edible oil and bring the batch to the boiling point.

Meanwhile, mix the balance of the cream with the evaporated milk and gradually add this to the batch while boiling and cook to a firm ball.

Add the salt and flavor, as desired, mix well, then spread the batch out to cool, size, cut and wrap.

This formula may be used for caramels that are to be coated with chocolate, or the batch may be rolled into thin sheets ¼" thick and used as a layer on short or chewy nougat, or on chewy coconut work.

What ingredients do

In this formula the cream and evaporated milk, are used to obtain the characteristic caramel flavor. The coconut oil is used for lubricating purposes, that is, to prevent the caramel from sticking to the teeth. However, the cream, evaporated milk and coconut oil contribute little to the consistency of caramel. The consistency is governed by the quantity and types of sugars used.

An examination of the formula indicates that we are using 30 lbs. of non-crystallizing sugars (25 lbs. corn syrup plus 5 lbs. invert sugars) and 22 lbs. of crystalling sugar (granulated sugar). This combination will retain chewiness almost indefinitely.

If a total of 30 lbs. of corn syrup were to be used (5 lbs. of corn syrup in place of the invert sugar) there would be a tendency to make a tougher caramel which would also lack sweetness.

Graininess and dryness develop

Suppose we were to replace the invert sugar with granulated sugar. We would then have 25 lbs. non-crystallizing sugar against 27 lbs. of crystalling sugar. This caramel would then eventually grain and dry out.

The consistency of other chewing candies such as salt water taffy, kisses, and toffee, like caramel, are controlled by the quantity and types of sugars used.

The most popular caramels and chewing candies are those that have a good chew. To insure the retention of chewiness, invert sugar should be used. Invert sugar can be used to an advantage in these candies, when used in conjunction with corn syrup. This is due to the fact that invert sugar, being a sugar product, adds sweetness, tenderness and retards graining.

Any caramel or chewing candy formula can be adjusted to the use of invert sugar as follows: to make them more tender and sweeter, replace a portion of the corn syrup with an equal weight of invert sugar. To check graining, replace a portion of the sugar with an equal amount of invert sugar.

Coconut Cakes and Kisses

(Plastic)

Part No. 1:

15 lbs.	Desiccated coconut (Part medium shred part macaroon)
3 lbs.	Water
4 lbs.	Standardized invert sugar

Mix the water with the invert sugar, add the coconut, mix well and set aside for about 15 minutes.

Part No. 2:

15 lbs.	Sugar
5 lbs.	Corn Syrup
	Water—to dissolve the sugar

Boil all together to 255-260°F.

Pour this into the freshened coconut (part no. 1), mix well, add 5 pounds of short fondant and ½ ounce of invertase and mix thoroughly, then add 1 pound of Frappe-No. 1, color and flavor, as desired, and mix well. Spoon out into kisses, cakes or bars.

This formula consists of a greater proportion of crystalline sugar, therefore, is considered a grained type of confection. All grained candies, as a rule, are more likely to throw off moisture and dry. The use of invert sugar attracts and retains the moisture in grained candies, keeping them fresh longer.

When dry desiccated coconut is added to any type of candy, it will absorb moisture from the candy, causing pre-mature graining, staleness, and drying. Therefore, freshening of the desiccated coconut with invert sugar and water which can easily penetrate into coconut is desirable. A syrup of a low viscosity such as invert sugar will be absorbed by the coconut in a short period of time.

In this particular formula invertase is used to form additional invert sugar (as will be explained in cream centers). The invert sugar will be present in the syrup portion of the candy along with the moisture and corn syrup. The invert sugar will help to retain the moisture thereby preventing any possibility of mold growth and fermentation.

Dry desiccated coconut for any candy can be freshened by mixing one pound of water with 2 pounds of invert sugar, then add 10 pounds of desiccated coconut, mix well and set aside while preparing the remainder of the batch.

Rolled Cream Centers

Standard Rolled Cream Centers

90 lbs.	Granulated Sugar
10 lbs.	Standardized invert sugar
20 lbs.	Water
10 lbs.	Frappe No. 1 or No. 2
2 ozs.	Invertase
	Flavor and Color

Place the sugar, invert sugar, and water into a kettle and heat. Stir the batch occasionally until it boils. Thoroughly wash down all grains of sugar that adhere to the sides of the kettle and cook the batch as rapidly as possible to 244-248°F.

Pour the batch onto a crystal-free open-type fondant beater that has been lightly moistened with water. Immediately sprinkle the surface of the batch with not more than 2 ounces of water. Allow the fondant syrup to cool to approximately 100-90°F., and start beating. Add the invertase and allow that batch to beat until it becomes opaque. Then add the frappe, color, and flavor and continue beating until the batch becomes plastic. When the resulting fondant has cooled to room temperature, form it into pieces of the desired size and shape. Coat with chocolate.

To produce a lighter and slightly more elastic center, double the amount of Frappe No. 1. If desired, ground nut meats and preserved (glacé) diced fruits may be added just before the batch sets into a plastic mass.

Preparation of Frappé No. 1

Fifty pounds of corn syrup is cooked to 245°F., 50 pounds of invert sugar is then added and mixed. This is promptly placed into a beater, the beater started and 1 pound of egg albumen dissolved in 2 pounds of water gradually added and the batch beaten until light.

Alternate Method: Place 25 pounds of the invert sugar and 1 pound of spray dried powdered egg albumen into a beater (add no water), and mix at slow speed. Meanwhile, heat 25 pounds invert sugar and 50 pounds corn syrup to the boiling point (do not cook). Add the hot syrup to the mixture in the beater and beat until light.

This is a typical formula for all rolled cream centers. Many variations can be made using this basic formula. To obtain a lighter center up to 30 pounds of frappe can be used; or a frappe made with 3 lbs. of egg albumen dissolved in 6 pounds of water (thereby producing a lighter whip or frappe) can be used. Fruit purees can be used, cooking the sugar and invert sugar several degrees higher to compensate for the added water.

Cream or evaporated milk may be used in place of the water to produce the West Coast or Opera Cream type of cream center.

Grainy batches, fermentation and drying are some of the common problems when making rolled cream centers. This type of center is liable to these conditions, due to its high sugar content. Invert sugar aids in producing a smooth, tender cream that is less likely to ferment and dry.

Invertase

The addition of frappe serves a dual purpose. First, it increases the volume; second, it increases the syrup density due to the higher solubility of the sugars used in its preparation. This increase in syrup density often is not sufficient to prevent yeast, mold or bacteria action. To further effect sugar solubility and increase syrup density standardized invertase is used. This has the effect of converting the sucrose into invert sugar until the maximum density is obtained. By this action fermentation and bursting of coated centers are eliminated. Yeast, mold spores and bacteria will not propagate and are eventually shriveled up because the syrup has a greater attraction for water than the organism.

Invertase is also necessary to retard the drying out, and to make soft tender creams. However, it might be well to explain how invertase acts inside a cream

center. The moisture or water in the syrup portion of a cream takes up all the sugar (sucrose) that it can hold in solution. The Invertase, which is an enzyme, works on the sugar (sucrose) in the syrup and converts it into invert sugar (levulose and dextrose). We now have sucrose syrup plus invert sugar which makes a larger amount of syrup and a smaller percentage of sugar crystals. As the invertase continues to work, more invert sugar is developed and still more sugar crystals can go into solution due to increased solubility.

Gradually the action of the invertase will diminish due to the density of the syrup. When all of the available moisture in the syrup or cream is utilized, the invertase will become dormant and cease to function. In other words, when the syrup density of a cream center has reached 82-83% solids, it has arrived at its end point, depending, of course, upon the type of center being made.

Fermentation rarely, if ever, occurs in cream centers when the syrup density is 79 or more.

An added advantage is gained by using invertase. A center containing larger quantities of sucrose will set more quickly and retain its shape better than when large percentages of corn syrup or invert sugar are used. When a center is too soft, it must be cooled in order to set properly and often it is coated before reaching the proper coating temperature. This will result in mechanical leakers, often confused with fermentation.

We can make a relatively short type of fondant, containing little invert sugar, add frappe to lighten it, and then add sufficient invertase to convert the maximum amount of sucrose into invert sugar. This will prevent fermentation. A cream of this type is rugged and can be easily handled under average conditions. After coating, the invertase will begin its work and soon the centers will break back into a flowy center. This makes possible the production and coating of a firm type of fondant center, without the usual difficulties of coating a softer center.

Cast Cream Centers

Cast cream centers are usually made with a basic fondant to which is added a cooked (bob) syrup which then melts or reduces the fondant to a semi-fluid condition, after which frappe, invertase, flavoring materials, and color are added. It is a question of adding enough heat units to melt the fondant thus making it possible to easily cast it into starch impressions.

Standard Cast Cream Centers

Part No. 1

100 lbs.	Basic Fondant

Place the fondant into a cold or moderately warm mixing kettle. Do not heat.

Part No. 2—"Bob" Syrup

40 lbs.	Granulated Sugar
10 lbs.	Corn Syrup
10 lbs.	Water
10 lbs.	Frappe No. 1
2 ozs.	Invertase
	Flavor and Color

Bring the sugar, corn syrup, and water to the boiling point. Carefully wash down all grains of sugar that adhere to the kettle and cook the batch to 236-238°F. Pour this "bob" syrup into the basic fondant (Part 1), mixing continuously. Then add the frappe, invertase, flavor, and color, and mix thoroughly.

If necessary, heat to obtain a casting temperature of 145-155°F. Cast the batch into starch impressions. When the centers have set, remove them from the starch and coat with chocolate.

Let us consider the following formula for Basic Fondant:

100 lbs.	Granulated Sugar
25 lbs.	Corn Syrup
10 lbs.	Standardized invert sugar
25 lbs.	Water

The temperature to which this batch can be cooked may vary between 238-244°F., depending upon the type of cast cream centers being made.

When making basic fondant for cast creams, it is common to include a desirable amount of crystal-controlling ingredients, such as invert sugar and corn syrup as it is necessary to balance the fondant syrup so that premature crystallization will not occur during the period in which the cooked syrup is cooled and later beaten into fondant. This formula will produce a quality basic fondant, regardless of how it is cooked, —in an open kettle, under vacuum, or when operating any other types of cooling and beating equipment generally used in the production of fondant.

The function of invert sugar in fondant making is to produce a larger percentage of syrup in the fondant and to increase the density of the syrup portion of the fondant. In addition, it helps to produce a smoother fondant—a fondant having a larger number of fine crystals, resulting in a more tender fondant.

The frappe, as explained in the section on rolled creams, can be made in advance and stored as a stock material. Its purpose is to lighten and whiten the cream centers.

The addition of invert sugar or other materials tends to create an immediate increase in syrup density which is insufficient to prevent fermentation. With the addition of invertase there will be a continuing increase in syrup density until the saturation point has been reached and at this point fermentation cannot take place.

While it is a common practice to add the invertase at the time rolled cream centers are being creamed, it is just the opposite with cast cream centers. The invertase is held back and added after the batch has been completely assembled and almost ready for casting. This is done to assure full effectiveness from the invertase.

An additional advantage is attained by using invertase. A center containing a larger percentage of sucrose will set more quickly and retain its shape better than when large percentages of corn syrup and invert sugar have been used.

We can start with a relatively short type of center containing a little invert sugar, and added frappe to lighten it. Then sufficient invertase is incorporated to convert the maximum amount of sucrose to invert sugar within a period of approximately one week. This will prevent troubles from spoilage.

A center of this kind is of a rugged type which is

easily handled under average factory conditions. After coating, the invertase will begin its work and soon the centers will soften into a semi-liquid consistency.

Fudge

Vanilla Fudge

36 lbs.	Granulated Sugar
3 lbs.	Standardized Invert Sugar
24 lbs.	Corn Syrup
6 lbs.	Coconut Oil (92° M.P.)
3 lbs.	Water
27 lbs.	Sweetened Condensed Whole Milk
21 lbs.	Fondant—Consisting of:
100 lbs.	Granulated Sugar
20 lbs.	Corn Syrup
10 lbs.	Standardized Invert Sugar
25 lbs.	Water

Cook to 245° F., cool and beat into fondant.

15 lbs.	Frappe No. 2 (see below)
3 ozs.	Salt
	Vanilla Flavor

Place the sugar, corn syrup, invert sugar, coconut oil, condensed milk and water into a kettle. Mix, apply heat and with constant stirring, cook to 244°F. Remove from heat. Add the salt and fondant, mix well, then add the Frappe and flavor. Mix and stir until the batch becomes heavy, pour on oiled waxed paper. Nut meats may be worked into surface, if desired.

Frappe No. 2

50 lbs.	Standardized Invert Sugar
50 lbs.	Corn Syrup
2 lbs.	Egg Albumen-Powdered, Spray Dried

Place half the invert sugar and egg albumen into a marshmallow beater. Mix at slow speed. Meanwhile, heat the remaining invert sugar and corn syrup to approximately 200°F. Add to the mixture in the beater. Beat until light.

In fudge, spotting and hardness are due to drying. The moisture retaining properties of invert sugar stops this problem.

Invert sugar is also used to produce smooth, tender fudge that will retain its moisture for relatively long periods. By replacing a portion of the corn syrup normally used with a similar weight of invert sugar, the fudge will be shorter, more tender and less liable to premature dry or mold.

Hard candy

All-Sugar Hard Candy

(Simplex Vacuum Cooker)

80 lbs.	Granulated Sugar
9 lbs.	Standardized Invert Sugar
20 lbs.	Water
	Color and Flavor

Place the sugar, invert sugar, and water into a kettle; mix well. Heat, and stir the batch occasionally until it boils. Wash down all sugar crystals that adhere to the kettle and cook the batch rapidly to 270-275°F. Turn off the heat, place the vacuum dome in position, start the vacuum and when the gauge registers 15 inches, time the batch and continue to pull the vacuum to the maximum for 7 to 10 minutes. Release the vacuum before detaching the vacuum dome.

Turn the batch out on an oiled slab, add color and flavor, and mix thoroughly. The batch is now ready to be pulled, spun, and cut.

Pure-Sugar Hard Candy

(Clear or Pulled)

(Open-Fire Work—Forced Draught Gas)

50 lbs.	Coarse Granulated Sugar
12 lbs.	Cold Water
5 lbs.	Standardized Invert Sugar

Place all together into a clean kettle and gradually bring the batch to the boiling point. Carefully wash down all sugar crystals that adhere to the kettle. Place a clean cover over the boiling syrup so that the steam from the batch strikes the sides of the kettle and dissolves the particles of sugar that may splash against the kettle. After the batch has boiled for three or four minutes, remove the cover and cook as rapidly as possible, to 320-330°F. (according to color desired).

Immediately pour the batch onto a cold cooling slab, allow to remain undisturbed for two or three minutes; then turn in the chilled edges of the batch.

After the batch is partly cooled, fold it together and add color, working it into the hot part of the batch. Add sufficient flavor, then work this into the batch just enough to distribute the flavoring materials evenly. Avoid working the batch too much unless opaque candy is desired.

Increase or decrease the amount of invert sugar to compensate for variations in the strength of the sugar, the character of the water, and the length of the cooking period per batch. Invert sugar made hard candy is more easily worked or spun and it gives a certain flexibility to batches that causes a reduction in scrap.

Marshmallow

Cut Flavored Marshmallow

2¾ lbs.	Gelatin (#225 Test)
20 lbs.	Water
50 lbs.	Granulated sugar
40 lbs.	Corn Syrup
20 lbs.	Standardized Invert Sugar
	Color and Flavor as desired

Mix gelatin with half of the water, either warm or cold, and set aside for at least 15 minutes. Place the remainder of the water into a pan, add the sugar and invert sugar. Heat until the sugar is dissolved. Do not boil. Then add the gelatin-water mixture, mixing well, until the gelatin is dissolved. Then add the corn syrup and place the batch into an upright marshmallow beater and beat until 1 gallon of the marshmallow will weigh approximately 4 pounds net. Color and flavor may now be added, and the batch spread onto ordinary wrapping paper to form a sheet of the required height. Sprinkle the surface of the batch with desiccated macaroon coconut. When the batch has set, it may be cut into pieces of the desired size and shape, then rolled in desiccated coconut. Permit the cut marshmallow to dry on the surface before packing closely together.

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Tenderness, smoothness, and softness are all desirable in marshmallow. Invert sugar helps in each of these as well as its moisture-retaining and grain-preventing properties.

For larger production, very efficient continuous beaters are used. These beaters produce a marshmallow much lighter than can be obtained with the ordinary upright beater. With the increase in lightness much more area is exposed to the air. Therefore, increased amounts of invert sugar is desirable to prevent loss of moisture.

Jellies

Starch jelly gums, turkish delight, pectin and agar jellies are all produced in quantity. It would be quite a lengthy task to give examples and formulas for each describing the use of invert sugar.

Starch jelly gums cooked in the open kettle requires a large amount of water which is necessary to fully gelatinize the starch. During the long cooking period some of the sugar is made into invert sugar. The amount produced is normally not enough to prevent drying, toughening and crystallization. The amount of invert sugar used is usually about 10% of the total sugars in the batch.

When making starch jelly gum using a continuous type gum cooker additional invert sugar must be used to compensate for the usual amount of sugar normally inverted during the long cooking period.

Pectin Jellies

This type of jelly produces invert sugar during the cooking operation. Normally sufficient invert sugar is produced, however, invert sugar may be added if excessive drying out or crystallization occurs. If the goods are to be shipped to dry areas, it may be necessary to add from 5 to 10% invert sugar. Excessive amounts of invert sugar can cause sweating; care in producing the proper amount of invert sugar should be maintained.

Agar Jellies

From 10 to 25% of invert sugar can be used depending upon climatic conditions and shelf life requirements.

We have attempted to show how standardized invert sugar has been used in all types of candies by retail and wholesale manufacturers. Standardized invert sugar has been used in candies for over 50 years. It is usually cooked in the candy batches to prevent graining, drying and fermentation—to protect and preserve the candies until sold and consumed.

There are two basic types of candies—candies that grain and candies that do not.

Cream centers, fudge, marzipan, plastic cream coconut work, grained pulled mints, grained nougats are made so that part or all of the sugar used in the formula will grain. Grained candies, as a rule, are more likely to throw off moisture and dry. Invert sugar attracts and retains moisture in grained candies, keeping them fresh.

Candies that do not grain are caramels, taffys, chewing nougat, chewing coconut, molasses kisses, jellies, nut brittles and hard candy. Invert sugar will make these candies less liable to grain or lose their chewing character.

Products Liability

How it affects the Manufacturer, Packer, Dealer and Consumer

BY HERMAN STEERMAN, Philadelphia Attorney
and member of the Bar of U. S. Supreme Court

PRODUCTS LIABILITY is a vast subject and covers the sale of any conceivable kind of property other than real property. For the purpose of this talk, I am, therefore, limiting myself to the sale and use of food products, and will only depart from that where the rules of law as to any other product relates to food.

The law regarding product liability has, in recent years, been the subject of great change. This is due to a great extent to five factors:

1. The sale of food in sealed containers, such as cans, bottles and packages of all types;
2. The use of complicated machinery in the processing, bottling and packaging of foods;
3. The use of various substances, foreign to the subject matter;
4. The publicity given to food cases to the public generally and the legal profession through magazines, periodicals, newspapers, radio and television; and
5. The liberality of the courts to claimants.

The first category, that of merchandising food in sealed containers, has not only prevented the consuming public from sampling or inspecting the product, but on the contrary to rely upon the vendor or purveyor as to the wholesomeness of the product.

The second involves the use of complicated machines made of metal, rubber, glass and plastic, and the use of lubricants, any part of which might find its way into the end product.

The third, has brought into play various chemicals, which, when used in controlled quantities, tend to preserve the product, make it more appetizing, give it a better eye appeal, and render it more digestible. But when they are used in improper amounts, become deadly poisons and, when taken into the human body could cause serious injury, if not death.

The fourth factor has contributed to the increase in food product liability cases by giving the public an awareness of what to look for in food matters and tends to cause a susceptible person to imagine ills that he ordinarily would not have.

In the recent "poison fish episode" in Philadelphia, the publicity given to the public by newspapers, radio and television, created an hysterical situation, which spread far beyond the confines of the incident and seriously and adversely affected the fishing industry along the entire Atlantic seaboard. Not only was the consuming public fearful of eating "flounder fillets," but fearful of all seafood: fresh, preserved or canned. Actually hundreds of people imagined they had ill-

An address presented at the Philadelphia Section of the American Association of Candy Technologists, October, 1961.

nesses due to eating fish, when they were in no manner connected with the contaminated product. The same thing happened in the "cranberry incident." This bad publicity not only created considerable litigation, but also cost the industry millions of dollars in business losses.

I hasten to point out, however, that while product liability cases lend themselves to false or imagined claims and malingering, the vast majority of plaintiffs are people who honestly feel that they have been aggrieved. But there still are those who will "eat mouse" every day if the chances of recovery are good.

And lastly, the fifth factor has given the manufacturers, packers and dealers in food their greatest problem, and litigants their greatest boost.

One cannot help but come to the conclusion, after reading the recent food product cases, that the courts are beginning with the plaintiff's injury and the plaintiff's damage and moving from there to a theory of liability which will permit a recovery.

Court strains to protect consumer

While an implied warranty must usually originate in a contract, the courts have created unusual theories to support liability. There are holdings to the effect that an implied warranty runs with the article purchased, down to the ultimate consumer; that the ultimate consumer may be the beneficiary of a third party contract between the seller and the buyer; but whatever the reason, the court strains to protect the consumer. There is manifest throughout the decisions a recognition by the courts of the great changes wrought in the manufacture and preparation of food. That to a great extent the home has been replaced by the factory. This is quite obvious in frozen, packaged, complete dinners of various kinds. Courts in their effort to do substantial justice to the consumer try to place the cost of damages on the one financially able to bear it—the industry. Thus the courts, by what lawyers term "judicial legislation" have in effect brought about the same results as the legislature has in the Workmen's Compensation Act.

They have been most liberal towards claimants and have opened up a new field for negligence lawyers. Many a hard case is encountered where bad law emerges.

With the increase in the consumption of canned and packaged foods and bottled beverages, it is to be expected that products liability cases will be productive of an ever growing volume of litigation.

In order to better understand the various theories of liability, it is well to know something of the historical background of products liability.

Historical background

The liability of a vendor for the sale of unwholesome food is not a modern tendency; the doctrine has its origin from the earliest times.

The Holy Book reads, "And if thou sell ought unto thy neighbor, or buyest ought of thy neighbor's hand, ye shall not oppress one another." (Lev. 25, 14). This has been interpreted to mean that one must be careful not to deceive one's neighbor whether it be in matters of contract, hiring, money changing or sales.

The interpretation of this clause in the Bible, by the Rabbis, are set forth in the Talmud, which specifically states:

"It is forbidden to defraud in business, e.g., if there is a defect in the goods, it is forbidden to sell it as perfect, unless he notifies the buyer of the defects (L.C)."

and further, "It is forbidden to blow wind into a cattle whether to make it appear fat, or to give her special water in order to appear fatter, or to comb her hair, or blow in wind in her womb, or to soak meat in water it shall appear white and fat, or to dye old clothing to make it look like new (L.C.)." (*Code of Jewish Jurisprudence*, Ch. 228, §6&11.)

However, the penalties set forth in the Talmud causes the defrauder to be considered an irreligious person from which he can only purge himself by returning the purchase price to the person defrauded and making him whole. There was no provision whereby the purchaser was able to recover damages beyond the cost of the merchandise.

In China, under the Tang Dynasty, the legal code provided: "When dried or fresh meats cause men to become ill, all left-over portions should be speedily burned. The violator will be flogged ninety strokes. He who deliberately gives or sells it to another will be banished for a year, and if the person to whom it has been given or sold dies, the offender will be hanged." (*Encyclopedia Brittannica* (1948) Vol. I, p. 187).

Early English law

Under the early law in England

"the obligation imposed upon victuallers, vintners, brewers, butchers, cooks and other common dealers in, and purveyors of, food and drink for immediate human consumption seems to have been greater than that imposed upon dealers in, and purveyors of, other merchandise. This obligation came from old criminal statutes, apparently adopted out of tender consideration for human life, under which such dealers and purveyors were liable to punishment for selling as food and drink corrupt victuals, wine and beer." (*The Sale of Food and Drink* by Harry C. W. Melick, citing among others, the Statute, 51 Henry III (1266) of the Pillory and Tumbril & Assize of Bread & Ale; Statue of Edward I, (between 1272 and 1307), entitled De Pistoribus & Brasiatoribus, et aliis Vitellariis, etc.)

Under the early law, the liability was criminal.

Not only was the selling of unwholesome food an offense against public health at common law, but such selling was considered a nuisance and was indictable. (4 Block Com. 162; 1 Russ Crimes (8th Amer. ed.) 109; Roscoe. Crim. Ev. (4th Amer. ed. from 3rd Lond. ed.), 379; Wharton's Crim. Law of U. S. 2nd ed, 36, etc.)

As a consequence, it wasn't very long before dealers in food became responsible civilly to the purchasers in an action for deceit, for any special injury resulting from the breach of the law committed by the seller. See, *Burnby v. Bollett*, 16 M & W 644 (1847).

A taverner or victualler who failed to exercise the degree of skill required by his calling or trade was held to be civilly liable in tort by the common custom of the realm. Should he violate the statute imposing

an absolute duty upon him to sell only wholesome food and drink, he was similarly liable in tort for breach of this duty. *Burnby v. Bollett*, supra; Year Books, 9 Hen. VI, 53, and 11 Edw. IV. 6B.

This liability was an exception to the general rule of caveat emptor, in that liability was imposed upon the seller of unwholesome food, both civilly and criminally, regardless of whether the seller did or did not have knowledge of the condition.

A note in Keilway's Rep. 91 (22 Hen. 7), 72 Eng. Reprint 254, states that, ". . . no man can justify selling corrupt victuals, but an action on the case lies against the seller, whether the victual was warranted to be good or not."

In *Roswell v. Vaughn*, (1607), Cro. J, 196, 97 Eng. Reprint 196, the Court said: ". . . But if a man sells victual which is corrupt, without warranty, an action lies, because it is against the commonwealth."

This common law was brought over to our shores by the early colonists and became the law of the land.

Liability based upon negligence

In general, "a person who sells or purveys articles of food must exercise reasonable care to insure their being wholesome and fit for consumption, and is liable in an action ex delecto on the ground of negligence for any injury resulting from their being unwholesome or unfit, and attributable to his lack of due care. The negligence must be the proximate cause of the injury, and the injured person's contributory negligence will, as a rule, bar any recovery." 36 Corpus Juris Secundum –Food–§57.

However, in some jurisdictions, such as Pennsylvania, something more than ordinary care is demanded of a manufacturer of food or beverages. The Supreme Court of Pennsylvania, has stated that, "Those engaging in the business of manufacturing or compounding food or beverages for consumption must use a *high* degree of care to see that the food or beverage is free from foreign or deleterious substances that injuriously affect the user. All reasonably scientific and up-to-date methods must be employed to obviate the presence of any such injurious substances, and even where such methods are employed, where such substances get into the product, whose presence there might possibly be due to that uncertain human quality, –carelessness,–somewhere along the line, the manufacturer is responsible to a member of the public injured thereby." *Rozumsilski v. Phila. Coca-Cola Bottling Co.* 196 Pa. 114, 116 (Broken glass in bottle).

Liability high when container is sealed

Moreover, where food or beverages are sold in sealed containers, such as cans, bottles, jars and packages, the duty rises to a still higher degree, more especially, where the manufacturer, processor, packer or bottler advertises the product to be safe and free of any foreign substances and fit for the purpose intended. No particular language is required to place this additional burden on the vendor.

This is demonstrated in a recent case involving canned boneless chicken, which was labeled, "Ready to Serve Boned Chicken" which was used in chicken chow-mein at a school cafeteria. A young lady who had eaten the chicken chow mein sustained an injury to her throat from a chicken bone which was in the chow-mein.

The court in reversing a judgment for the defendant packer held that: "The finding of a foreign substance or a deleterious ingredient in food taken directly from a sealed container creates a strong inference that it was there at the time of the sale by the packer and that the packer was negligent." *Bryer v. Roth Packing Co.*, 221 Md. 105, 156 Atl. 2nd. 442, 77ALR 2nd. 1.4.

Label representation important

The case seemed to turn on the representation on the label. The court stated: "We think the express representation by the packer in this case that the chicken had been boned, and its knowledge that boned chicken would often be served in styles in which bones are not normally and naturally expected, including chicken chow-mein, make the claimant's case applicable . . . ." and further ". . . . that the representations of the packer, the to-be anticipated use of the chicken expected to be boneless, and the nature of the food in which the bones were found would permit the trier of the fact to find that (a) the chicken bones or slivers that were in the chow-mein were 'something that should not be there' . . . . and (b) because of their presence the chow-mein was not reasonably fit for human consumption as food." *Bryer v. Roth Packing* supra at p. 7)

I will have more to say about the question of liability for a substance found in food natural to the product.

Warning on label

A recent case in California raises a situation in reverse of the "boned chicken" case. There, a user of aspirins for a number of years brought an action to recover damages in the amount of $500,000.00 for the chemical destruction of his stomach due to acidic substance contained in the tablets. The plaintiff alleged that he regularly, since 1934, took about six or eight tablets every other day, believing that defendant's product was safe. He further alleged that prior to 1952, the defendant failed to make any reference in its advertising to "seeing a doctor if pain persists after taking same" and that prior to 1954 inserts in each package failed to carry the same legend, but that since then the ads and circulars contained such a warning. The court directed the defendant to answer questions as to whether in fact the statements did or did not appear in the ads or circulars.

There the failure on the part of the manufacturer to warn the user of the dangerous propensities of the product was considered evidence from which the jury could find liability. It would be interesting to know the final result in this case, but since it is still at issue, we can only watch and wait. See *Michael Cembrook v. Sterling Drug, Inc.*, California District Court of Appeal Civil Action, No. 19564; decided February 23, 1961, reported in Food and Drug Cosmetic Law Reports, 22,676.

The boned chicken case is a departure from the rule, that the presence of bones in chicken, shells in crabmeat, shells in shucked oysters or oyster stews, cherry pits in canned cherries or cherry pies, prune pits in prune whip, bones in pork-chops or spare-ribs and

crystallized kernels of corn in cornflakes, all of which are natural to the types of food eaten, do not make the supplier liable to one injured by the bone or pit. See *Mix v. Ingersoll Candy Co.* 6 Cal. 2nd 674; *Silva v. F. W. Woolworth Co.*, 28 Cal. 2nd 649, *Brown v. Nebiker*, 229 Iowa 1223, *Goodwin v. Country Club of Peoria*, 323 Ill. App. 1, *Adams v. A & P Co.* (1960) 112 S.E. 2nd 92, (N. Carolina).

However, Pennsylvania seems to be in accord as appears in two recent cases. One where a lady emptied a can of oysters in a pan of milk in preparation of a stew, and in tasting the stew swallowed a sharp oyster shell about the size of a 25¢ piece; the defendant argued that it was not practical, in the process of canning oysters to eliminate all shells and that the shell was natural to the product just as a bone is a part of a steak and a single cherry pit natural to a cherry pie or in a can of cherries. The court decided that it was for the jury to pass upon the testimony, and that it could not be held as a matter of law that the oysters were reasonably fit for human consumption. *Bonenberger et al v. Pittsburgh Mercantile Co.* 345 Pa. 559 (1942).

The second one, *De Graeff v. Myers Foods, Inc.*, 19 D.&C. 2nd 19, 8 Bucks 364, 73 York 14 (1960), was a suit to recover damages for injuries sustained from a chicken bone in a chicken pie. The court held that a manufacturer could be sued by a purchaser in assumpsit based upon a breach of implied warranty of fitness for human consumption.

Liability based upon warranty

While the theory of liability was formerly based upon negligence, the vast majority of jurisdictions predicate liability on contract, expressed or implied, on a warranty that food is fit for human consumption.

A warranty, as is usually understood, must arise out of some contract, expressed or implied. The courts, however, in food cases, in their efforts to protect the consuming public, regardless of whether the public is or is not a direct purchaser of the product, have enforced liability against the remote manufacturer, packer or processor on the theory that the consumer was induced to purchase the product by representations as to their quality, purpose and uses which were relied upon by the purchaser; where such representations were untrue and the purchaser was damaged in using the product for the purpose as represented. This has been extended to protect those who, in fact, did not make the purchase, but were in a class for whom the purchase was made; such as the purchaser's family, guests, friends, etc.

Expressed warranty

Where a seller makes an affirmation of fact relating to the goods sold, which induced the buyer to purchase the goods, such an affirmation is called an expressed warranty. These warranties run from the simple one made by a retailer to those made by large manufacturers, packers and processors through advertising. The courts have held that in such instances the representations are not only to the immediate parties, but also to the consuming public. The theory being that such representations induced the purchase of the goods, and therefore, purchasers have a right to rely on the advertising statements as having the force and effect of warranties, irrespective of the vendor's contractual intentions.

Implied warranty

In the absence of an express warranty, the law implies that the manufacturer, processor or packer of foods, condiments and confections intended for human consumption warrants that his products are fit for human consumption.

This gives a great advantage to the plaintiff in that it practically makes the manufacturer, packer, processor or retailer an insurer of his products.

This implied warranty not only is binding upon the manufacturer, processor and packer, but also upon the dealer, notwithstanding that the seller sold the food in the original package in which he received it from his vendor. This liability has been extended to the dealer on the theory that a purchaser has a right to rely on an implied warranty of fitness and merchantability in the sale of packaged food where the retailer does in fact have a superior knowledge of the article sold, or better opportunity for inspection. *Bonenberger v. Pitts. Mercantile Co.*, supra., *Young v. A & P. Tea Co.*, 15 Fed. Supp. 1018, etc.

In Virginia the court held a dealer liable on the theory that the dealer was in business for profit and, therefore, must bear the burden. That he has a greater opportunity to see to the wholesomeness of his product which vendee cannot. That while vendee's health and life may be at stake, all that the dealer would suffer would be pecuniary loss. *Colonna v. Rosedale Dairy*, 166 Va. 314.

Ultimate consumer

There are further holdings to the effect that an implied warranty runs with the article purchased; that the ultimate consumer may be a third party beneficiary to the sale made by the manufacturer and the distributor. *Sincavage v. Armour & Co.*, 74 D & C., 279 (Pa.); *Gaskovitz v. Contis*, 102 Pitts. L.J. 17 (Pa.).

A most interesting case of product liability is that of *Dillon v. Wm. S. Scull Co.*, 164 Pa. Superior Ct. 365 (1949). The plaintiff sued to recover for damages sustained by her due to the exploding of a vacuum sealed glass jar of coffee which she purchased at a Penn Fruit self service store. The defendant sold the coffee to the Penn Fruit Co. which placed them on the shelves. The customer picked the jar of coffee off of the shelf and placed it in a wire basket mounted on wheels, with other articles. She then wheeled the carrier to the aisle and counter where they were to be removed by her from the basket, checked and the total price computed and paid. The plaintiff placed her hand on the jar in order to lift it out of the basket when the jar exploded and her hand was severely cut. The defendant did not offer any testimony.

The court held that: "The evidence . . . sustained a finding that the explosion occurred from a force generated from within the container, and that this force was built up until it was greater than the atmospheric pressure and until it also exceeded the fracture or yield point of the glass container.

"Coffee, being an inert substance, could not of itself cause the pressure and explosion. Therefore something,—something other than coffee, was packed in the

contents of the jar. Whatever may have been this adventitious substance, it was placed in the container with the coffee before it left the defendant's plant. It could not have entered the jar after it was vacuum packed, for the evidence showed that the jar of coffee had a normal aspect, which would not have been true had the container been opened."

The court further held that: "This is a case of the 'proof of negligence by circumstantial evidence' (*Stanalonis, Admr., v. Branch Motor Express Company,* 325 Pa. 426, 57 A.2d 866) where, under the evidence, the only reasonable conclusion is that the accident was caused by the negligence of the defendant . . . ." (Pages 368-369)

And further, on Page 370, the court stated: "In the instant case the thing which caused the injury was under the exclusive management and control of the defendant, for the 'manufacturer was for all purposes in exclusive control of the . . . (container) and its contents, as its contents were undisturbed until it reached the consumer's hands . . . The particular dereliction is not shown, nor was it necessary; the negligent act is demonstrated by (the) showing . . . . *Rozumailski v. Phila. Coca-Cola Bottling Co.*"

Had the defendant offered evidence to show the manner in which the coffee was processed, packed and sealed in the jar-container; had the defendant produced experts to testify that the pressure within the jar could not have been sufficient to cause it to explode, the result might have been different. However, this is a matter of pure conjecture.

While such proof would not of itself, as a matter of law, free the defendant of negligence, nevertheless, it could possibly sway the jury to disbelieve the plaintiff's version as to what happened.

In the case of *"C" Candy Co. v. Johnson,* (1939), 60 Ga. App. 268, where, despite proof by the defendant that the candy bar in question went through elaborate processes, under the supervision of numerous people, calculated to exclude the presence of foreign substances, such as glass, the court held that such proof did not demand an inference as a matter of law; that the defendant exercised due care in the manufacture of the product. The question of negligence was left for the determination by the jury.

The Dillon-Scull Coffee case is very important to those manufacturers engaged in the processing and sale of candy, nuts, cakes and other food stuffs in vacuum sealed containers made of glass, metal or plastic; and should make them realize that the warranty not only runs as to the product, but also as to the container.

Remedies proposed

Faced with so formidable an array of legal consequences flowing from the manufacture and sale of food products, what is one to do, to guard oneself against claims, both real and imagined, valid and false?

There are certain steps which I can recommend, which, while not a cure-all, will, over the years, keep food claims within bounds and lessen their impact on the food industry. They are:

1. Tight controls over the manufacturing, processing, selling, packaging and distributing, so as to eliminate any possibility of contamination or other danger from either the product or the container.

2. Educational programs through magazines, periodicals, radio and television to enhance the product in the eyes of the consumer.

3. Resistance to the payment of so-called "nuisance values."

4. Intelligent and courageous defense of questionable claims by use of experts and capable legal counsel.

The first two, I feel, do not require any additional comment.

With respect to the third, I am reminded of the rash of claims which occurred in Philadelphia about twenty years ago, involving chain restaurants, milk and ice cream companies and theater companies. It was customary to get rid of these claims as quickly as possible, by the payment of nuisance values. This encouraged the institution of numerous claims, which grew to such an extent that the payment of nuisance values became economically prohibitive.

The representatives of the dispensers of the foods which I have referred to, in an effort to stifle and limit claims, most of which proved to be false or unfounded, decided to contest these claims, and put the claimant to as much trouble as possible in order to substantiate the validity of his claim.

Nuisance claims contested

The courtroom was used as a platform from which the company, through the use of its experts, was able to demonstrate to the satisfaction of a jury, that the product was manufactured in a sanitary and safe manner, so that the foreign substance could not have possibly entered the product; that the product which was sold, was fit for human consumption and was the finest obtainable. Considerable doubt was cast on the validity of the plaintiff's claim by this demonstration, and many a jury was persuaded to find a verdict in favor of the defendant. This practice has to a great extent eliminated a considerable portion of claims that would have otherwise been instituted, and is in vogue today.

Calculated risk

As to my fourth remedy, this involves a calculated risk; a calculated risk in that a defense of a questionable claim, which could be settled for a reasonable sum might result in a large verdict against the defendant.

However, I recommend highly the use of experts and capable legal counsel to defend claims which the defendant feels are unfounded and unsupportable.

Because of the limitation of time and space, I have limited my talk to but a few cases, although there are many others worthy of study and discussion. The selection of those cases which I have singled out for discussion, however, should not be taken as an indication that the others are unimportant.

In closing, I would like to leave this thought with you: that an enlightened claim policy, coupled with courageous, intelligent and wholehearted defense of appropriate cases, can and will bear dividends not only to the company involved, but also to the entire industry.

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The MANUFACTURING CONFECTIONER'S

Candy Clinic

The Candy Clinic is conducted by one of the most experienced superintendents in the candy industry. Some samples represent a bona-fide purchase in the retail market. Other samples have been submitted by manufacturers desiring this impartial criticism of their candies, thus availing themselves of this valuable service to our subscribers. Any one of these samples may be yours. This series of frank criticisms on well-known branded candies, together with the practical "prescriptions" of our clinical expert, are exclusive features of The MANUFACTURING CONFECTIONER.

Panned Goods; 1¢ and 2¢ Pieces

Code 11A1
Grained Hallowe'en Candies
1 lb.—39¢

(Purchased in a chain variety store, Chicago, Ill.)

Appearance of Package: Good
Container: Cellulose bag printed in red and white.
Candies: Candies are made in different shapes.
Colors: Good
Molding: Good
Texture: Good
Flavors: Fair
Remarks: Slightly high priced for this type of confection.

Code 11B1
Bubble Gum Coins
1¢ each, sold by package, 50 pieces in package, 49¢

(Purchased in a department store, Chicago, Ill.)

Appearance of Package: Good
Container: Folding oblong box, printed in blue, red and white. Outside Hallowe'en cellulose wrapper, printed color imprints of witch, cats, etc.
Gum: Gum is wrapped in assorted colored foils in the shape of coins.
Color: Good
Texture: Too tough
Bubbles: Poor
Flavor: Good
Remarks: This is the best bubble gum novelty package we have examined.

Code 11C1
Bubble Gum Stick
1¢—No weight stated

(Purchased in a chain variety store, Chicago, Ill.)

Appearance of Piece: Good
Size: Good
Gum:
Color: Good
Texture: Good
Flavor: Fair
Bubbles: Poor
Remarks: Suggest formula be checked as it was very hard to get gum to bubble.

Code 11D1
Cherry Taffy
1¢—No weight stated

(Purchased in a chain variety store, Chicago, Ill.)

Appearance of Piece: Good
Wrapper: Wax paper printed in red.
Taffy:
Color: Good
Texture: Good
Taste: Poor
Remarks: Suggest some other kind of flavor be used as this flavor left a bad after-taste.

Code 11E1
Blanched Peanut Squares
8 ozs.—25¢

(Purchased in a chain variety store, Chicago, Ill.)

Sold in Bulk
Squares:
Color: Good
Texture: Good
Peanuts: Good
Taste: Very good
Remarks: The best peanut candy of this type we have examined in a long time; very well made and good eating. Cheaply priced at 8 ozs. for 25¢.

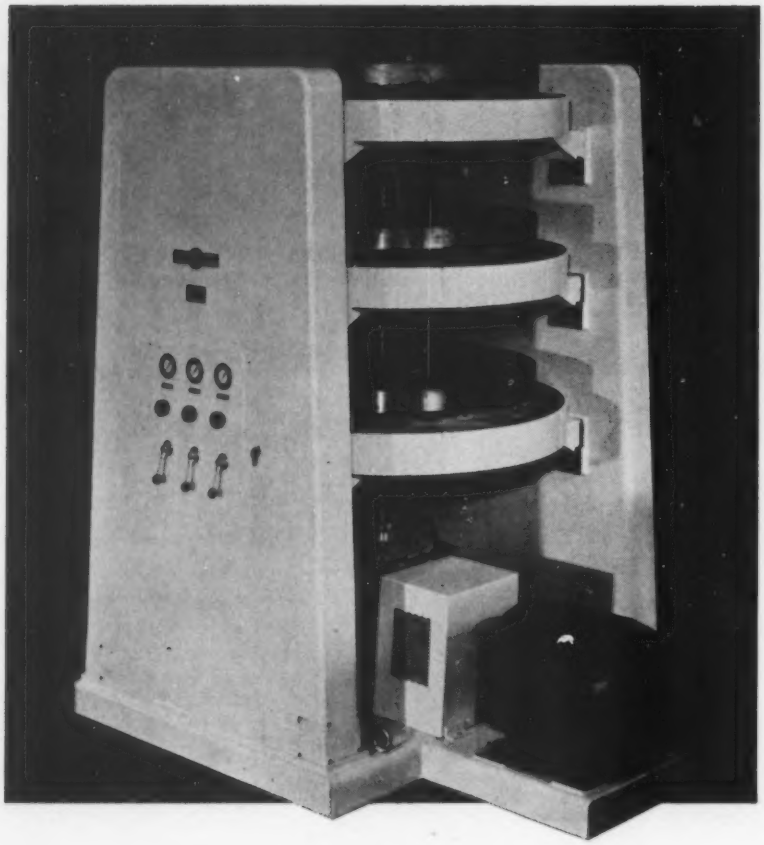
Code 11F1
Malted Milk Balls
4 ozs.—39¢

(Purchased in a chain variety store, Chicago, Ill.)

Appearance of Package: Good
Container: Oblong folding box, white, printed in blue and white. Large window in center of top and front side.
Balls: Milk Chocolate Covered:
Color: Good
Panning: Good
Finish: Good
Center of Malted Milk Ball: Good

Candy Clinic Schedule For the Year

JANUARY—Hard Candies
FEBRUARY—Chewy Candies; Caramels; Brittles
MARCH—Assorted Chocolates up to $1.15
APRIL—$1.20 and up Chocolates; Chocolate Bars
MAY—Easter Candies; Cordial Cherries
JUNE—Marshmallows; Fudge
AUGUST—Summer Candies
SEPTEMBER—Uncoated & Summer Coated Bars
OCTOBER—Salted Nuts; Gums & Jellies
NOVEMBER—Panned Goods; 1¢ and 2¢ Pieces
DECEMBER—Best Packages and Items of Each Type Considered During the Year.



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All adjustments for the new mill are automatic. Pressure gauges regulate settings for repetitive operation. Noise and vibration are greatly reduced. A highly streamlined profile, with elimination of all unnecessary recesses and projections makes cleaning an easy task. This is important today, in view of increasingly strict public health laws.

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Remarks: A very good eating malted milk ball but highly priced at 4 ozs. for 39¢.

Code 11G1
Malted Milk Balls
8¼ ozs.—39¢

(Purchased in a chain variety store, Chicago, Ill.)

Appearance of Package: Good
Container: Oblong folding box, large window on top and front side. Box printed in yellow, brown and white.
Balls:
Coating: Milk Chocolate:
Color: Good
Panning: Good
Finish: Good
Center of Malted Milk Balls: Good
Remarks: A good eating milk chocolate coated malted milk ball. This is the best sample we have examined this year at this price. Cheaply priced at 8¼ ozs. for 39¢.

Code 11H1
Hard Candy Pop
1/3 oz.—2¢

(Purchased in a chain variety store, Chicago, Ill.)

Appearance of Pop: Good
Size: Good
Wrapper: Cellulose wrapper, name etc. printed on stick.
Pop:
Color: Good
Texture: Good
Flavor: Good
Remarks: The best 2¢ pop we have examined this year.

Code 11K1
Marshmallow Coconut Bar
No weight stated—2¢

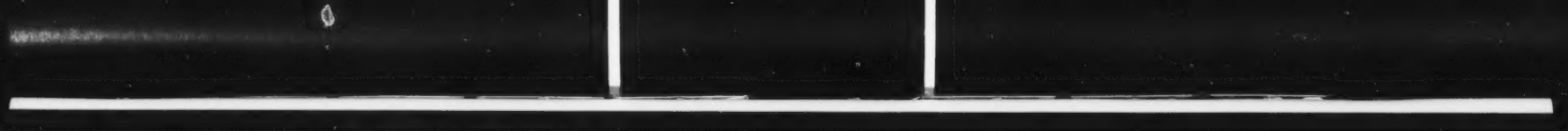
(Purchased in a chain variety store, Chicago, Ill.)

Appearance of Bar: Good
Size: Good
Wrapper: Cellulose wrapper
Bar:
Marshmallow: Good
Toasted Coconut: Good
Taste: Good
Remarks: A good size bar for 2¢; good eating. Suggest name, weight, etc. be printed on cellulose wrapper to avoid trouble with the Food and Drug Dept.

Code 11M1
Bubble Gum Ball
No weight stated—1¢

(Purchased in a chain variety store, Chicago, Ill.)

Appearance of Piece: Good
Wrapper: Cellulose wrapper.
Gum Ball:
Coating: Good



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VERONA

REGISTERED TRADEMARK

Color: Good
Texture: Good
Bubble: Good
Flavor: See remarks.
Remarks: Suggest a different flavor be used, as the one used tasted like pepper and left a bad after-taste.

Code 11N1
Caramel Taffy Pop
½ oz.–2¢
(Purchased in a chain variety store, Chicago, Ill.)
Appearance of Pop: Good
Size: Good
Wrapper: Cellulose wrapper printed in yellow.
Pop:
Color: Good
Texture: Good
Taste: Good
Remarks: The best 2¢ pop of this kind we have examined this year. Very good quality for a 2¢ pop.

Code 11O1
Assorted Opera Gum Drops
1 lb.–23¢
(Purchased in a chain drug store, Chicago, Ill.)
Appearance of Package: Fair
Container: Cellulose bag, round paper tag on top printed in blue, tied with yellow grass ribbon.
Gum Drops:
Colors: Good
Sugaring: Good
Texture: Good
Flavors: Good
Remarks: The best opera gums at this price that we have examined this year. Suggest bag be printed in colors to improve the appearance.

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HYFOAMA is sold all over the world by giving service to candy manufacturers: working out formulas and production methods on present and new items, giving demonstrations and other types of service; all free of charge.

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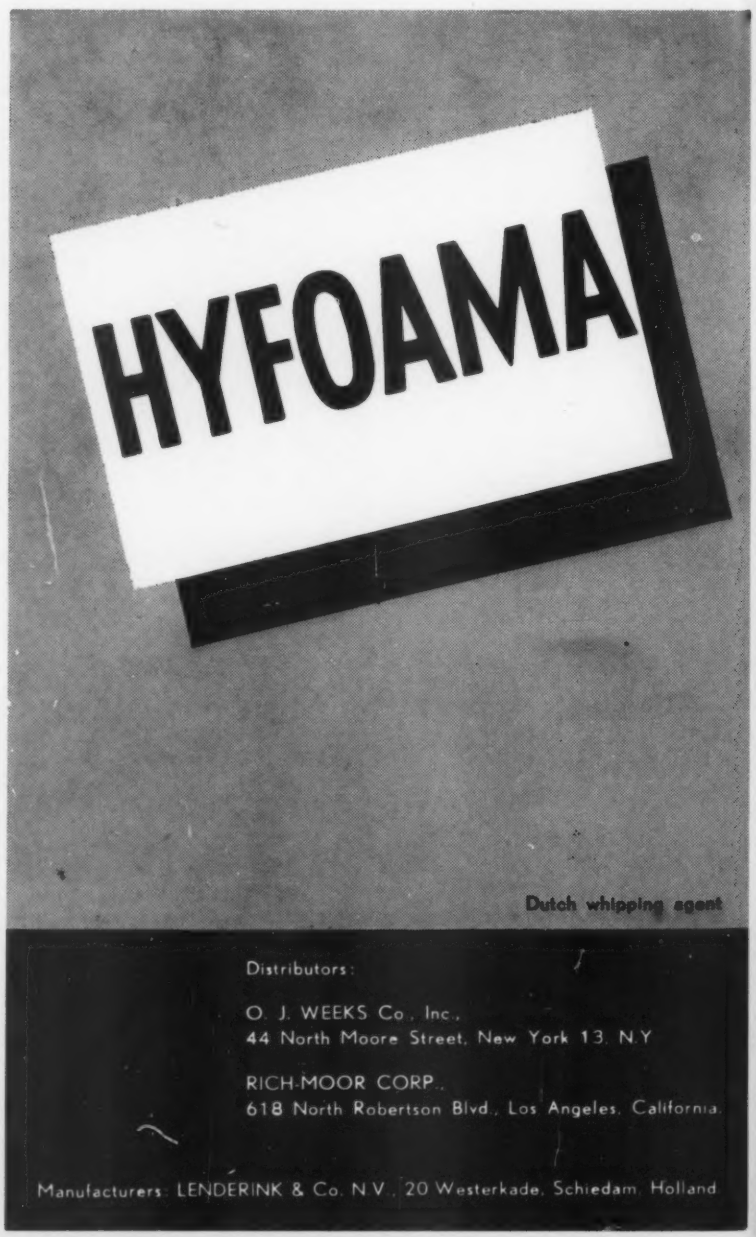
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Dan Tokowitz is an old timer in the candy business and well known both as Confectionery Merchandise Manager for the Goldblatt Stores and also as Sales Manager for Anne Marlowe Candy Kitchens. In buying for the Goldblatt organization, Dan uses dozens of different items which are sold through 26 stores. His total candy volume runs into several million dollars. He is shown here with Bessie Ottaviano, his gal Friday.

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AACT Activities

Jenkins elected head of Southeast section AACT

New chairman of the Southeast Section of American Association of Candy Technologists is **George Jenkins,** president, Tom Huston Peanut Co., Columbus, Ga. **Maurice Wynn, Jr.,** McAfee Candy Co., Inc., Macon, Ga. is co-chairman; and the treasurer is **Gilbert Dunn,** Johnson-Fluker Co., Atlanta.

The officers were elected at the October 20 meeting at which the guest speaker was Brigadier General, E. L. Patton, retired, of The Southern Utilization Research and Development Laboratory, New Orleans. Patton's discussion of "Taste Panels" was very well received by the members.—by **C. R. Seiler,** secretary, Southeast Section, AACT.

Sanitation speaker creates keen interest at Chicago section

At the October meeting, R. E. Marr, sanitation and maintenance supervisor of Mars, Incorporated, described his company's sanitation program. The speaker discussed the methods of cleaning as well as the materials and equipment used. In addition, he described the control methods by which the 100 men in the department are organized and directed. He told of the check-off system that indicates the status of each cleaning job and of the whole operation, which is the heart of Mars' sanitation program.

Some 75 members expressed keen interest in the topic during the spirited question and answer period which followed Marr's discussion.

At the November 21 meeting, M. N. Neis, Package Machinery Co., will discuss "Candy Wrapping Machinery."—by **Ed Heinz,** secretary, Chicago Section, AACT.

Philadelphia section AACT liability-insurance meeting lively

The October 12 meeting of the Philadelphia Section, American Association of Candy Technologists was one of the most instructive and successful meetings the group ever held. Some 50 candy manufacturers and suppliers heard Herman Steerman, Philadelphia attorney, discuss "Products Liability—How it affects the Manufacturer, Packer, Dealer and Consumer." (See complete address on page 39, this issue.)

Charles Frankenfield, Geraghty-Frankenfield Insurance Management, Bala Cynwyd, Pa., was the second speaker. He discussed Products Liability from the insurance viewpoint.

A lively question and answer period brought out many additional points of help to the members.

At the November 14 meeting, "Sanitary Inspection and Control of Incoming Raw Materials and Finished Products" will be discussed. Speakers will be Fred B. Jacobson, Sanitation Consultant, Philadelphia; and Dr. Walter Obold, Head of Department of Biological Sciences, Drexel Institute of Technology, Philadelphia. This meeting, too, promises to be a lively one.—by **Hans F. Dresel,** secretary, Philadelphia Section, AACT.

First of Fall meetings of New York AACT inspiring

If first Fall meeting of the New York section of the American Association of Candy Technologists is a barometer of the meetings to follow, the group will have to hang out the SRO sign. It was quite a success with C. G. Cokinos, Hamac-Hansella Machinery Corp., as guest speaker. His remarks on heating and cooking of candy generated many questions from the floor, making it an interesting evening.

At the November 9 meeting in Busto's Restaurant, James Gardner, J. W. Greer Co., Wilmington, Mass. will discuss "Cooling and Conditioning," with much of his talk centered around chocolate handling.—by **Fred Janssen,** secretary, New York Section, AACT.

Three speakers highlighted joint meeting of Northern California group

"Role of the Modern Laboratory in Confectionery Manufacturing" was discussed by David C. Gan, Curtis and Tompkins Ltd. at the Nov. 9 joint dinner meeting of the American Association of Candy Technologists, Northern California Section and the Northern California Confectioners Club.

Other subjects discussed were "Equipment and Processing Systems for Confectionery Industry" by James S. Casten, engineering consultant; and "Confection Industry and University of California Relationship" by Dr. George Stewart, director Food Science and Technology, University of California.

Each speaker was well received by the audience, and the meeting concluded with an interesting question and answer period.

The meeting was held at DiMaggio's Restaurant, Fisherman's Wharf, San Francisco.—by **Henry Spini,** secretary-treasurer, Northern California Section, AACT and **Frank Timberlake,** secretary-treasurer, Confectioner's Club.

HOW TO GET 9 MORE BAGS PER POUND:

USE SUPER-TOUGH "K" CELLOPHANE 116-202

Du Pont's new "K" cellophane 116-202 is extra-tough, extra-durable . . . *and* it gives you more coverage from every pound! That's a bonus of about 9 standard-size bags more per pound. The price hasn't changed, so you get nearly 13% more cellophane—free!

This super-strong, polymer-coated film is brilliant, clear and moistureproof like the rest of Du Pont's famous "K" cellophanes. And it seals at lower than normal temperatures to give you fast, reliable performance on prefabricated bags and make-and-fill machines.

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Better Things for Better Living ... through Chemistry

candy business

(*Continued from page 7*)

Southern Regional will convene at the Deauville Hotel, Miami Beach. The program will include a heavy schedule of business sessions keyed to exploring proven methods of beating the cost squeeze in retail operations. Galo P. Emerson, Sr., Putnam Pantry Candies, Danvers, Mass. and Palm Beach is program chairman. The social chairman is Jesse A. Anderson, Jr., Stuckey's, Inc., Eastman, Ga.

The Eastern Regional Conference is set for Jan. 20, Hotel Commodore, New York City. Program Chairman H. Arthur Melosh, Critchley's Candies, Tenafly, N. J., reports that in addition to discussing "How to Beat the Cost Squeeze", various members will make presentations of their most successful sales promotion.

The Western Regional will check in at the Seth Thomas Inn, Monterey, Calif. for a three-day run beginning Feb. 21. It is being held in conjunction with the Western Candy Conference, and according to General Chairman L. Gordon Hooper, Hooper's Chocolates, Oakland, Calif., the three-day session will include retail candy shop roundtables, a meeting of the American Association of Candy Technologists, a review of the Candy, Chocolate and Confectionery Institute program, a tour of the new Nestle chocolate plant at Salinas, Calif., and a golf tournament. Co-chairmen of the program are William T. Grace, Helen Grace Candies, Lynwood, Calif.; and Floyd McIntosh, The Candy Box, Marysville, Calif.

According to ARC President W. Ralph Hopkin, Marquetand's, Inc., Philadelphia, non-member manufacturing retail confectioners interested in guest participation in any of the regional conferences may secure complete information from headquarters of Associated Retail Confectioners, 221 No. LaSalle St., Chicago 1, Ill.

Gillette markets chewable cough tablet

Gillette Laboratories, Chicago, has introduced a chewable cough tablet, called Thorexin Coftabs. The cherry-flavored product contains an anti-tussive ingredient, d-methorphan (dextromethorphan hydrobromide) which is non-narcotic.

Raiton gets merchandising post at Blumenthal

Ronald Raiton has been named merchandising director for the confectionery department of Blumenthal Bros. Chocolate Co., Philadelphia. In promoting Goobers, Raisinets and other packaged goods of the firm, Raiton will be in charge of advertising, sales supervision and marketing programs aimed at supermarket sales.

He is a former research and media director of Marketing and Advertising Associates, Philadelphia advertising agency. Also he was research director of Penn Fruit Company, Eastern supermarket chain, and assistant to the director of store operations. He supervised and developed location surveys from which potential supermarket sites were evaluated.

AMCC plans dinner dance; committee named

The Asscciation of Manufacturers of Confectionery and Chocolate Inc. has scheduled its annual dinner in the Crystal Ballroom, The Park Lane Hotel, New York City, Nov. 18. Association Program Chairman Leonard Wurzel, Loft Candy Corp. has named Arthur Baumgarten, Barricini, Inc., chairman of the dinner dance committee. Others serving with him include: Tico Bonomo, Gold Medal Candy Corp., and Robert Burke Magnus, Jr., Magnus, Mabee & Reynard, Inc.

According to Association President J. Creighton **Drury**, National Licorice Co., the committee's plans for the 7th annual event portend an enjoyable evening.— by **Grace E. Vallee**, executive secretary.

Candymen named to FDA citizens committee

Mintener

Silverman

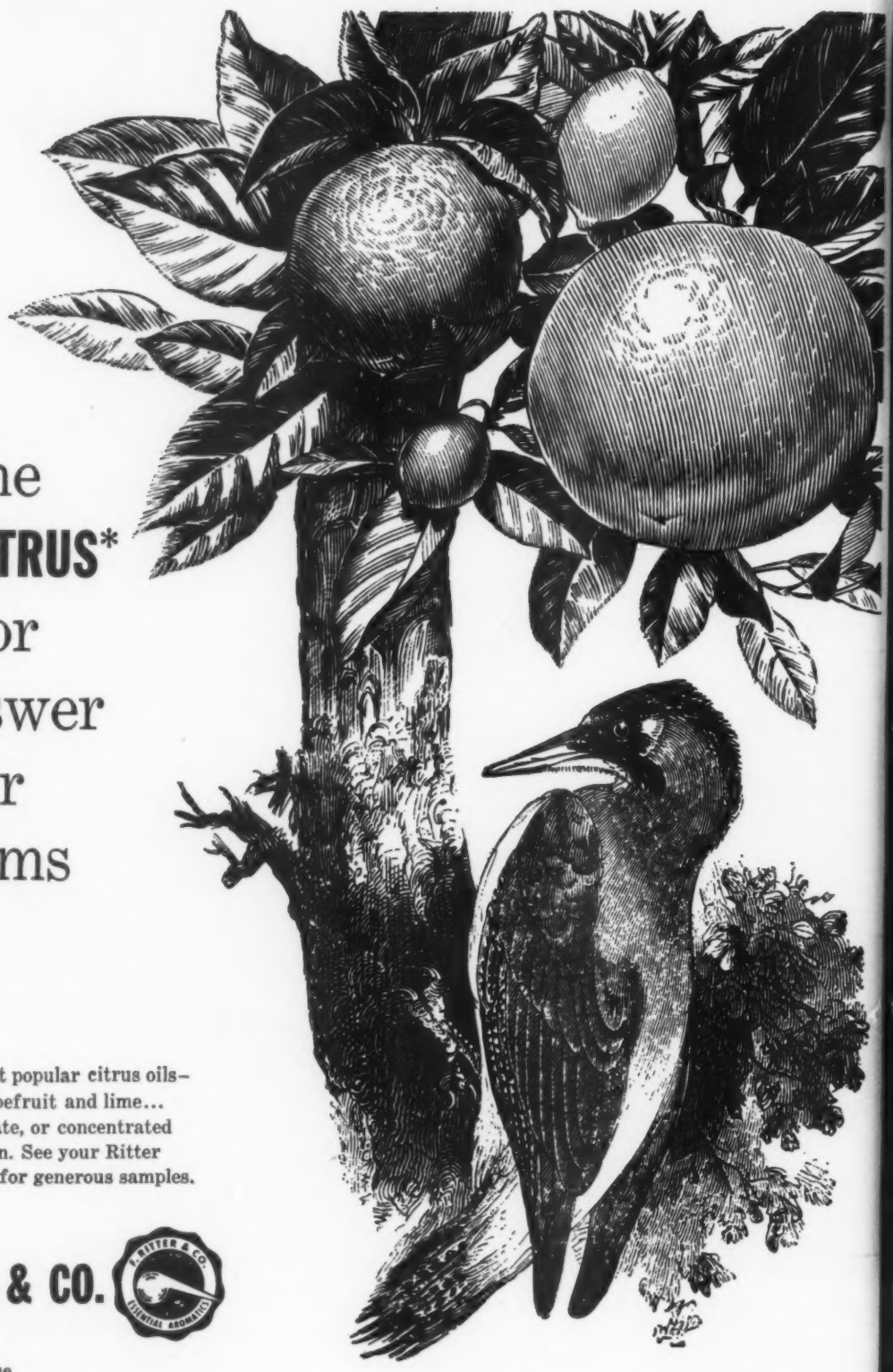
Bradshaw Mintener, general counsel, Chocolate Manufacturers Association, and former assistant secretary of the Department of Health, Education & Welfare; and I. J. Silverman, president of W. F. Schrafft & Sons Corp. have been named to the citizens committee of Food and Drug Administration. These candymen along with 14 persons from other industries will study the operation of the Food and Drug Administration, and will be concerned with the administration of the law and not with future legislation.

Candy group entertains students; future candymakers?

The Retail Confectioners Association of Philadelphia recently entertained 23 students of the Milton Hershey School who are showing interest in the food field as a career. Some of them work in the candy kitchen of the school as practical candymakers.

Accompanied by a faculty member, the boys toured

(*Continued to page 57*)



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All of the four most popular citrus oils–orange, lemon, grapefruit and lime... in their natural state, or concentrated to your specification. See your Ritter technician or send for generous samples.

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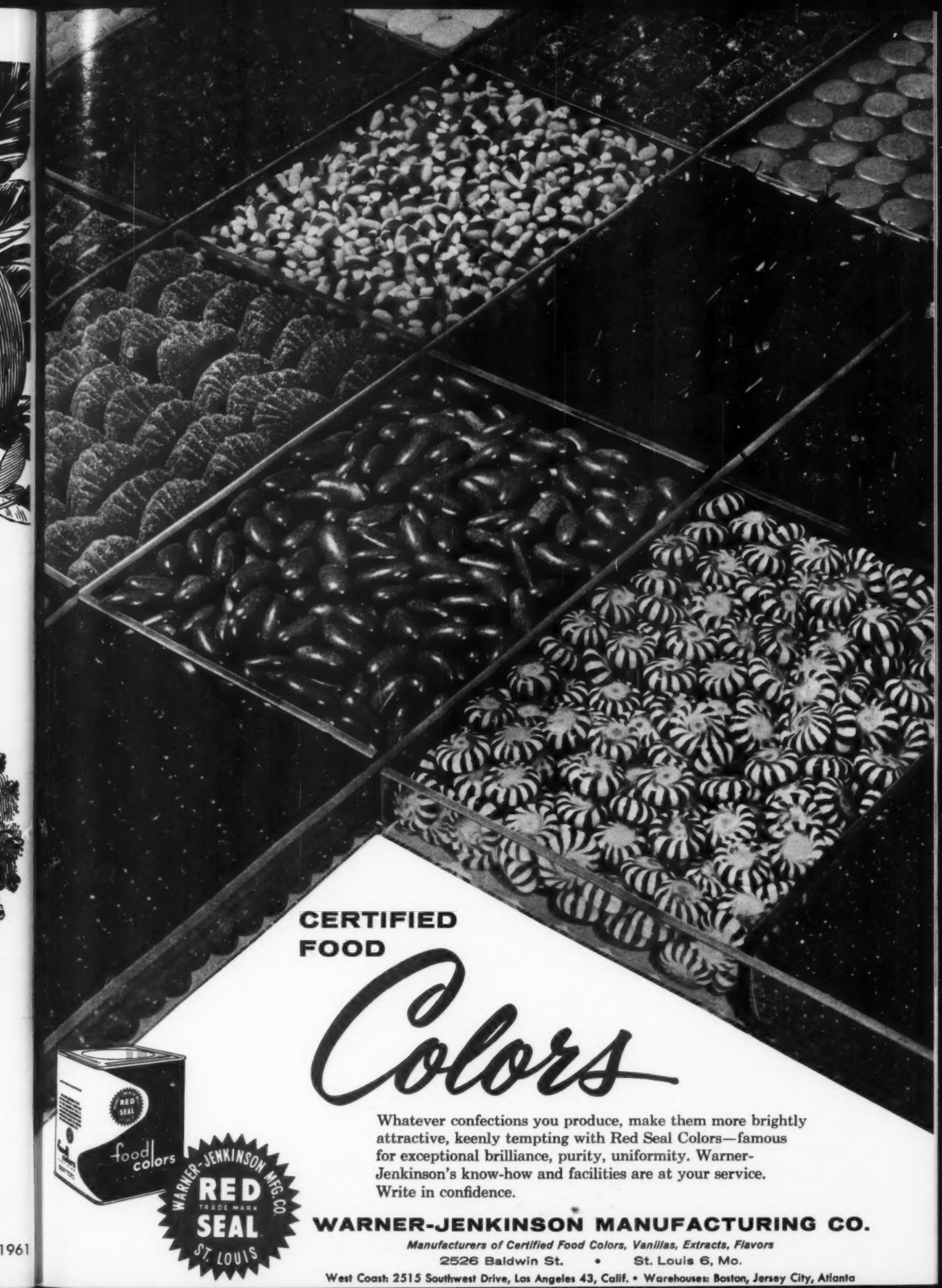
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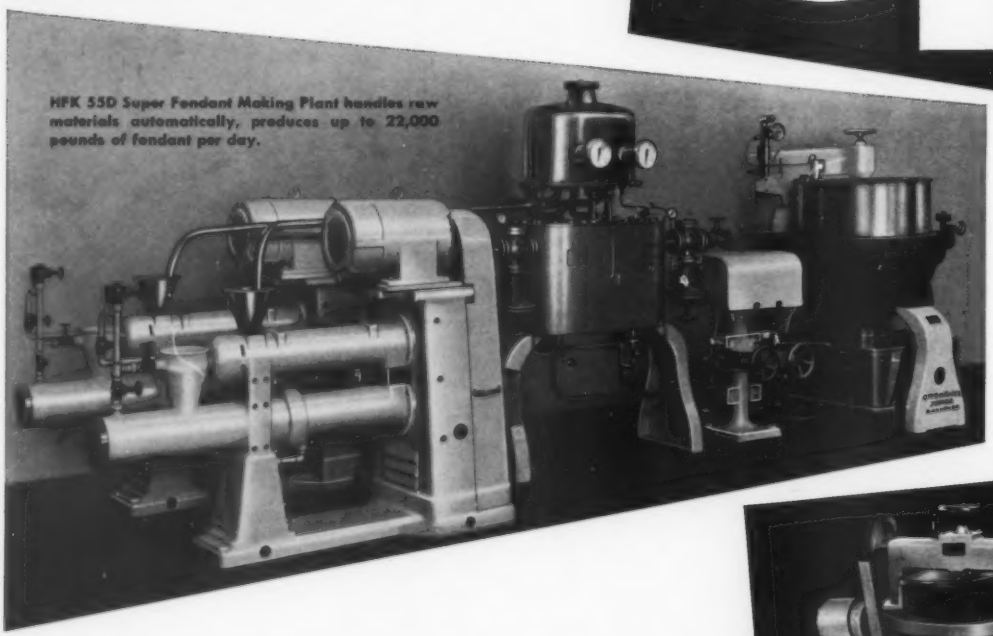
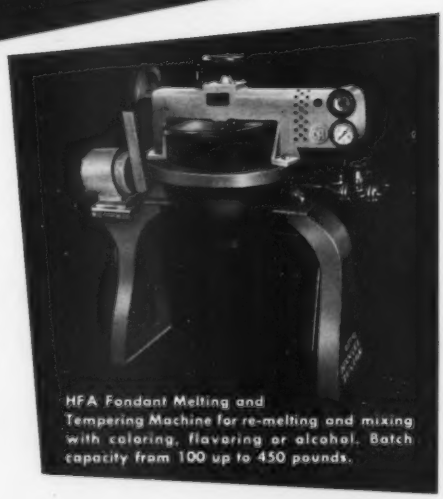
UP TO 10 TONS OF FONDANT PER DAY!



HFK 55D Super Fondant Making Plant handles raw materials automatically, produces up to 22,000 pounds of fondant per day.



HFA Fondant Melting and Tempering Machine for re-melting and mixing with coloring, flavoring or alcohol. Batch capacity from 100 up to 450 pounds.

No matter what your requirements, there's a combination of Otto Haensel machines to give you all the smooth, tender and dazzling white fondant you want . . . reliably and economically. In one continuous operation they automatically meter and mix ingredients, cook, cool and beat fondants of any required quality or consistency for finest cream centers, filled chocolates, fondant articles, bakery fondant for sugar coatings—any and every requirement.

Otto Haensel Fondant Cooking and Creaming Plants are available with capacities from one ton to ten tons per day—all backed by Haensel's world-wide reputation for superior materials and craftsmanship.

Write for prices and full details.

OTTO HAENSEL MACHINE CO.

60 East 42nd St., New York 17, N.Y.

candy business

(*Continued from page 53*)

the plant of Minter Brothers. Their guide Robert Minter explained every operation of the candymaking process.

Later the boys visited Joseph Stutz's retail establishment in Jenkintown, Pa., after which they attended the regular meeting of the Philadelphia Retailers at the Dairy Maid Restaurant.—by **Hans F. Dresel.**

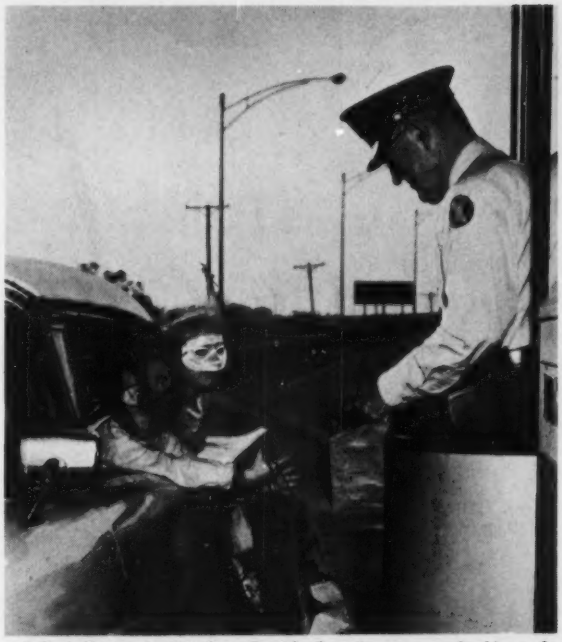
Ungerer signs contract with Sunkist

Ungerer & Company, New York City, has signed a three year contract with the Product Sales Department of Sunkist Growers to represent them in the United States and Canada as agents for Exchange Brand lemon and orange oils. Effective Nov. 1, Ungerer & Company has been retained as the only essential oil firm acting as a distributor for lemon and orange oils produced by Sunkist Growers.

Looking for U. S. agents

A candy maker abroad is seeking first-class representatives in New York, the North-East, Middle-West, West, South West and South-East sections of the United States. If interested write: Candy Business Section, The MANUFACTURING CONFECTIONER, 418 No. Austin Boulevard, Oak Park, Ill.

Candy on the tollway



Toll Collector J. Woodson Daniel "bags" some candy kisses for goblins-on-the-go.

The Illinois Tollway, having modernized transportation in the Chicago area, modernized Hallowe'en this year by putting "tricks or treats" on wheels. Motoring "tricksters" on the tollway on Hallowe'en received peanut butter candy kisses from the collectors manning the toll booths. Approximately 50,000 candy kisses were passed out to the younger patrons of the Tollway.

Program firming for 1962 Western Candy Conference

Officers and committee chairmen for the 1962 Western Candy Conference (scheduled for the Mark Thomas Inn, Monterey, Calif., Feb. 21-23) met in late October to review progress of plans for the conference.

The meeting was called by Co-chairmen **Harold Siner,** California Peanut Co., Oakland; and **Reed Robinson,** Gold Nugget Sweets, San Francisco.

Conference Program Committee Chairman **Clarence Kretchmer,** American Licorice Co., San Francisco reported that **Charles V. Lipps,** Curtis Candy Co., Chicago, will bring the conferees up to date on the progress of the Candy, Chocolate and Confectionery Institute's public relations program. Lipps is scheduled to speak at the Early Bird Breakfast.

Co-chairman of the Golf Committee **Horace Guittard,** Guittard Chocolate Co., Burlingame, Calif., reported that arrangements have been completed to hold the traditional golf tournament at the Monterey Peninsula Country Club. Three other courses also will be available for the delegates.

Those attending the Conference program planning session were: (First row, left to right) **Clarence Kretchmer,** American Licorice Co.; **Albert A. Baker, Jr.,** Golden Nugget Sweets, San Francisco; Co-chairmen **Harold Siner** and **Reed Robinson;** and **Claude Chaplin,** Western Confectioner, San Francisco.

(Back Row, left to right) **Horace Guittard,** Guittard Chocolate Co.; **Don Miller,** A. E. Staley Mfg. Co., San Francisco; **Alex Saran,** Kelley-Clarke Co., San Francisco; **Carl Foorman, Jr.,** Wyman Foorman, San Francisco; **Dudley Brainard,** Harry N. Nelson Co., San Francisco; **Bill Grace,** Grace Candies, Lynwood; **Ed. Harder,** C. & H. Sugar, San Francisco; **Louis Weill,** Blum's, San Francisco; and **William Simms,** Anheuser-Busch, San Francisco.

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SUGAR
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fresh ground sugar facilitates production

WE GRIND IT TODAY...
YOU USE IT TOMORROW

URBAN F. MYERS & CO.
Sugars
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Sweet story published by NCA

As the latest publication of the National Confectioners Association, "The Story of Candy" has been designed to present a clear insight into candy's role in the nation's diet, economy, and military feeding program.

The 32-page booklet includes the art and science of candymaking, history and size of the industry, and other pertinent facts about the field. Useful as a tool for students, teachers and parents, the illustrated booklet is available from the National Confectioners Association, 36 So. Wabash Ave., Chicago 3, Ill. at 10¢ each.

Chicago candy men honor Bloom

A testimonial banquet, attended by more than 100 candy men, was given in honor of Abe Bloom, B & K Theatres, Chicago, Oct. 20, at the Chateau Royale. Lester Rosskam, Jr. was eulogist and Sid Hoffmann, Jr. was master of ceremonies of the affair, at which the group presented Bloom with a color television set.

Dresel and Thomas appointed to NCA research committee

Hans Dresel, Felton Chemical Co., Inc., Philadelphia, and B. L. Thomas, Procter and Gamble Distributing Co., Cincinnati, Ohio, have been named to serve three-year terms on the Research Advisory Committee of the National Confectioners Association.

Honeywell offers special courses in automatic control

"Control Dynamics" and "Fundamentals of Instrumentation" are two special courses being offered by Minneapolis-Honeywell in 1962.

The first is an intensive 5-day course for instrument and systems engineers. It covers non-mathematical techniques for evaluating process dynamics in solving automatic control problems. Sessions will be held April 9-13 and Oct. 1-5. The registration is $100, the only charge for any of the school's courses.

Fundamentals of Instrumentation is a 10-day course primarily for engineers with little or no instrument experience, and for those needing to review the principles of conventional instrumentation. It will be held March 5-16, June 18-29 and Oct. 22-Nov. 2.

The courses follow the college format: lectures, demonstrations, student participation exercises and written examinations. Each course is limited to 15 students.

Information is available from Clarence A. Dyer, Instrumentation Education Center, Minneapolis-Honeywell Regulator Co., Wayne & Windrim Aves., Philadelphia 44, Pa.

They never had it so orange!

Reason: a more intense orange oil – Exchange Brand – with the richer, fuller flavor of the finest California oranges. That's why less than one ounce gives *fuller* flavor to a one-hundred-pound batch of cream centers.

When results are so dramatic, why skimp? Insist on Exchange Brand Orange Oil. Its uniformity is assured by the Sunkist name – and it comes to you in sealed tamper-proof containers.

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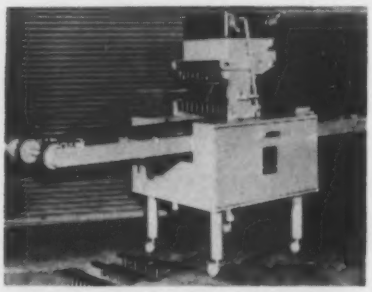
Also distributed in U.S. and Canada by Ungerer & Co.

New Products

A new depositor for marshmallow and similar non-free flowing materials has been developed. Deposits are made on plaques, boards or on a belt, with the necessary motions for spacings between deposits and skips between boards automatically made.

An extension of the hopper contains a set of traveling wire mats which continuously move the marshmallow into the suction range of the



special pump bar. This type of depositor is particularly suited to marshmallow which is so highly aerated that it no longer flows. A candy that is very popular in Germany, known as "neger kisses", is made on this type of machine.

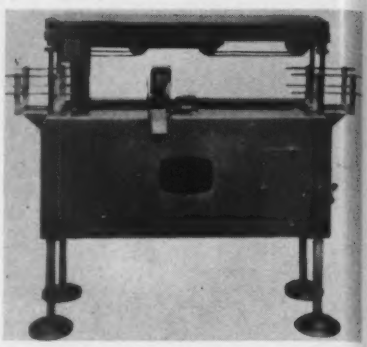
A magazine feed is available which will feed biscuits or sugar wafers onto the belt so that deposits can be accurately made onto them.

For further informataion write: Cantab Industries, Dept. MC, Toronto 7, Canada

An electronic checkweighing machine which can weigh cans, packs, pouches and similar packages at 400 per minute with an accuracy of ±1 gram has been introduced.

Features cited include: weighing head is virtually unaffected by external vibration; variations in ambient temperature and main supply voltage do not affect unit's accuracy; no warming up necessary since unit is transistorized; packages are weighed individually as they move continuously over weighing platform; and it is splashproof.

Capable of handling packages ranging from 1 oz. up to 2½ lb., the machine has three overlapping sets of ½" wide belts. One conveys packages to weighing platform where the weighing belts take over carrying the



packs past the weighing head. The third are take-off belts.

For further information write: Arenco Machine Co., Inc., Dept. MC, 25 West 43rd St., New York City.

Poly bag with built-in handle has been announced for packaging any item which might be carried about after the bag is opened.

Registration trademark applied for is Zip Handle. The bag is a bottom-gusset item, with design inverted so that the bottom of the bag becomes the top after it is filled.

The gusset is serrated and a handle is formed by the gusset when the bag is opened along the serration. This protects the handle until the bag is

People who use pecans for profit

Because: they're high oil content pecans—bright, full-meated and firm, with the delicate flavor of freshly shelled pecans.

Because: every pound of Fleischmann's is a pound of quality pecans, the pick of the pecan meats, rigidly graded to specification.

Because: they're backed with the kind of service which has earned Standard Brands a prestige reputation in the food field.

specify Fleischmann's *Fancy* Pecans

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opened. The handle will not snag on edges or protrusions with which the bag might come in contact during shelf life.

For further information write: Dobeckmun Division, The Dow Chemical Company, Dept. MC, Cleveland

A new laminated Mylar enrober belt has been developed that holds perfect alignment on long or short runs. The Mylar surface is firmly bonded to a vinyl backing. Vinyl strips are bonded, in turn, to the vinyl backing to provide guide channels. These channels ride in matching rollers, to guide the belt, eliminate side-slipping and frayed edges that reduce belt life.

For further information write: Voss Belting and Specialty Co., Dept. MC, 5646 No. Ravenswood Ave., Chicago 26, Ill.

Instrument which prevents boiler corrosion caused by minute amounts of dissolved sugar in the feed-water has been developed. When the sugar content of the water exceeds two parts in one million, the device sounds an alarm or operates a shut-down valve.

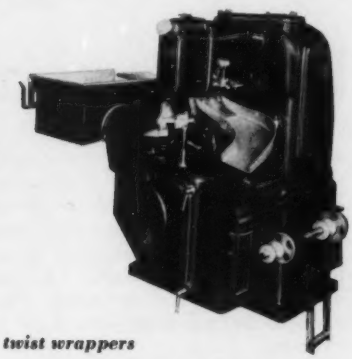
The instrument automatically samples the condensate return to the boiler system every 12 minutes, adds a small dose of sulphuric acid to the sample and boils it, thus converting any sugar present to glucose. It then adds caustic soda to neutralize acid, and then a dye (tetrazolium salt). The latter produces a pink color, varying with the amount of glucose present. Ten parts of glucose in a million parts of water, for example, would turn the sample almost black. A photoelectric cell detects the coloring and operates an electrical relay if the color indicates more than two parts of sugar in a million parts of water.

Consisting of two small cabinets (one containing the sampling and detecting equipment, the other most of the electrical controls) the unit speeds up laboratory analysis.

For more information write: William Body & Co., Ltd., Dept. MC, Rickmansworth, Hertfordshire, England.

Agitator cooking kettle—can be operated with three agitators working together for fine mixing and heat transfer. Or by removing one or two agitators, the unit can be used for products which require stirring action only. The Triple Duty Agitator can be used with three sizes of Hamilton standard steam-jacketed kettles. The stainless steel kettles are available for steam pressures of 40, 90, and 125 psi.

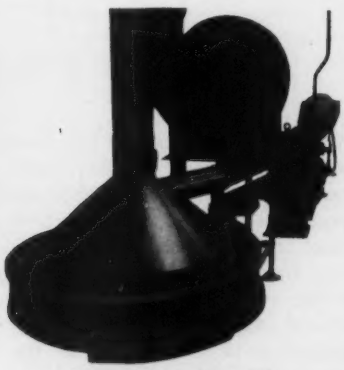
In operation, the primary anchor-type agitator scrapes the heated wall portion of the kettle, pushing product into the path of the faster secondary agitator. These secondary units mix



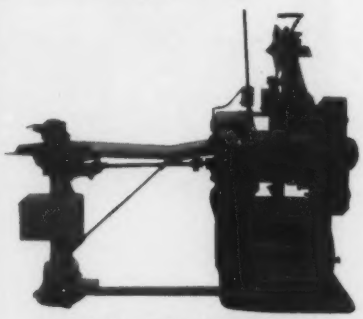
modern hard candy twist wrappers

FORGROVE 228

G. D. BOLOGNA 2250



FORGROVE ROSTOPLAST
hard candy plant



high speed toffee plant
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hard candy plant

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the product, keep it in suspension and eliminate dead spots in the batch around primary agitator shaft. Four types of secondary agitators for blending, mixing, or beating are available.

Features include: smooth aluminum alloy drive unit housing for easy cleaning; multi-strand roller chain designed to eliminate contamination possibility by overhead lubrication oil leakage. Also, finger type kettle scrapers, easily removed for cleaning, are available in nylon or nickel alloy. Accessories include: thermometer, outlet valves, covers, and hydraulic agitator tilt units.

For further information write: Hamilton Kettles Division, Brighton Corporation, Dept. AG, Section MC, Cincinnati, Ohio.

A new type corn syrup has been especially developed for the candy industry. The new corn syrup, with approximately three times the maltose content of regular confectioners' corn syrup, has the same viscosity and handling characteristics as the conventional syrups.

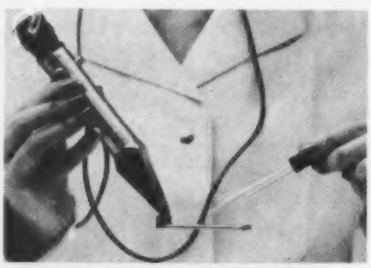
According to production tests the syrup greatly extends shelf life of various types of confections including assorted hard candies, caramels, starch jellies, marshmallows, fudges and nut brittles. It also resists color development during heating, producing brighter candy colors and unusually brilliant whites. The candies held their original dryness, color and form for appreciably longer periods even under direct exposure to high humidity and high temperature conditions.

The high maltose content of the new syrup makes candies dryer in two ways. First, it increases the candy's resistance to moisture absorption. Second, the candy manufacturer can use slightly higher pH levels, which decrease the amount of hygroscopic invert sugar formed from sucrose at the boiling point. Crystallization of sucrose is also inhibited by the high percentage of carbohydrates at or above the disaccharide level. Another unusual feature is its higher resistance to the browning reaction in the presence of proteins.

For further information write:— Corn Products Sales Co., Dept. MC, 10 East 56th Street, New York 22, N. Y.

A hand-held 12 oz. sugar refractometer provides a quick and highly reliable method of measuring the density of sugar solutions. The unit measures density through use of the refractive index based on the principle of total reflection. Solutions can be liquid or paste, transparent or translucent, colored or non-colored.

A few drops of sample are placed on the glass base. The base is closed

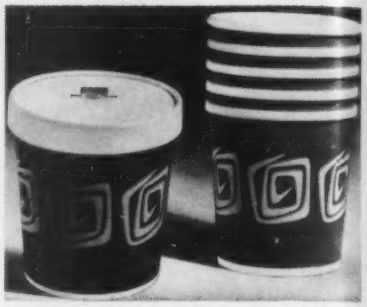


and the sugar density percentage is then read directly from a calibrated scale seen through the telescopic viewer. Tables which give corrections for temperature variations and the refractive indices of sugar solutions, distilled water and saturated saline solution are provided with each instrument.

Three models are available to measure sugar densities of up to 85%. Maximum length is 8" and maximum dia., 1.4".

For further information write: Tokyo Shibaura Electric Co., Dept. MC, 530 Fifth Ave., New York City.

Nested container with rolled rim has just been marketed. It permits the use of plastic closures or two-piece paperboard slipover lids. The lid also is available with a transparent window for product display. Available in pint size, the container is made of virgin bleached sulphate board. Other features listed include: rigid construction, plastic coating and high-gloss gravure



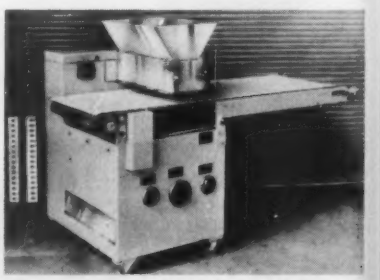
printing. The design permits an optimum nest, resulting in minimum storage space for empty containers. They release from each other readily, assuring trouble-free production on automatic filling lines, the maker reports.

For further information write: Mead Packaging, Dept. MC, 240 Canal St., Lawrence, Mass.

Packaged bulk sugar handling system keyed to fit small companies who operate on a seasonal basis has been introduced. Having a storage bin of 40,000 lb capacity, the packaged system includes: truck unloading spiral conveyor, bucket elevator, leveling spiral, overflow-type chute to the process area, and twin spirals to take from bin to process area (powered by one drive). Unit is described in form PSS-3-59.

For further information write: J. C. Corrigan Co., Dept. MC, 44 Norwood St., Boston 22, Mass.

A new candy extruder has been developed that features a non-stop roll motion. The extruding rolls turn continuously, so that there is no variation on the pressure in the hopper and at the die openings. The wire cut mechanism moves diagonally to cut the candy cleanly, and returns in

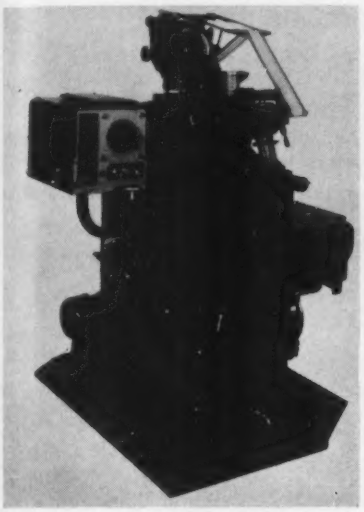


a circular motion to miss the falling pieces.

The machine is available in 18", 24" and 32" widths to continuously feed enrobers of those sizes. Hand wheel controls are provided to adjust all variables in the machine's motion, and these can be made without

stopping the machine. The cutting speed is adjustable up to 80 strokes per minute. This machine is made in Australia.

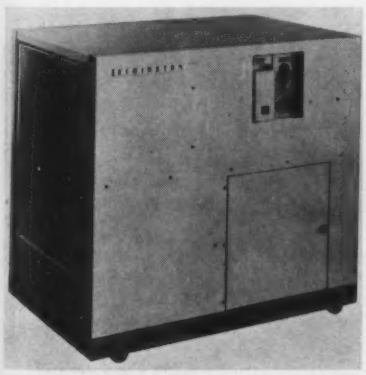
For further information write: Cantab Industries, Dept. MC, Toronto 7, Canada



High-speed cut and wrap machine operates at speeds up to 750 per minute. It will cut and wrap toffee, caramel or high boiled sugar in a plastic state. The Forgrove 42C is specially designed for twist wrapping cylindrical, rectangular, or square shapes.

New paper splicing unit enables use of continuous paper feed for uninterrupted high speed production. A rotary paper knife, electrical speed controls and speed indicator are additional features listed. It wraps with plain or printed cellophane, waxed paper or reinforced foil outer wrap. Waxed paper or foil inner wraps are optional. A handwheel adjustment regulates the exact number of pieces per lb.

For further information write: Package Machinery Co., Dept. MC, East Longmeadow, Mass.



Industrial dehumidifier with water removing capacity up to 36 gal daily has just been introduced. The unit is recommended for use in ambient temperatures from 50°F to 110°F and relative humidities down to 40%. The circulated air passes through a 16 x 20 x 1" replaceable filter. The dehumidifier (Model D20) has an adjustable temperature compensator, said to assure maximum moisture removal over a wide range of ambient temperatures.

Unit has a 2 hp hermetic refrigerating cycle. Other features include electric humidistat, magnetic starter, freezestat, 12 ft, 3-wire electric cord. It is available for 208 or 230-volt 60 cycle, or 200 or 230-volt 50 cycle single phase circuits.

For further information write: Air Conditioning Division, Remington Corp., Dept. MC, Auburn, N. Y.

Determination of Amylose in Starch

B. Carroll and H. C. Cheung, Jour. Agric. & Food Chem., Vol. 8, No. 1 (1960)

Description of the use of Congo Red colorimetrically for the determination of A. Adsorption of dye is independent of chain length of the polysaccharide over a wide range.

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Merchandising Memo

Candy and Birthdays. A Candy and Nut Shop, in upper New York, reports success with its "Twosomes". The shop stacks different (in content and package design) boxes of candy side by side, and offers them at a very attractive combination price. Sign at the candy display suggests: "When buying candy as a birthday anniversary gift for someone near and dear, buy another package for the kiddies or for your very own pleasure." This simple maneuver has helped stimulate confectionery sales for this candy-maker no end.

Candy and Television. One confectioner borrowed a television set from the local dealer during the World Series, placed it in his window with candy in the foreground and a sign stating, "Tom Terks Television and Cathy's Candies suggest watching tv and munching candy is a whale of a lot of fun."

Candy and Winter Sports. Beginning in early Fall, one manufacturing retailer promotes candy to both the active and passive sports enthusiasts via window displays and newspaper ads.

Message for the ads take the tack that sports activities require lots of energy and people of the sports world—whether actively or passively engaged in them—should eat candy . . . the energy food. The confectioner's ad theme points out that not only the players need energy, but sports spectators too, to cheer the team on, both at the pep rallies and at the games.

The window displays are tied to the same theme with a big blow-up of each week's ad, pictures of members of the teams, surrounding his Weekend Special, and a big sign reads, "Candy, the Energy Food."

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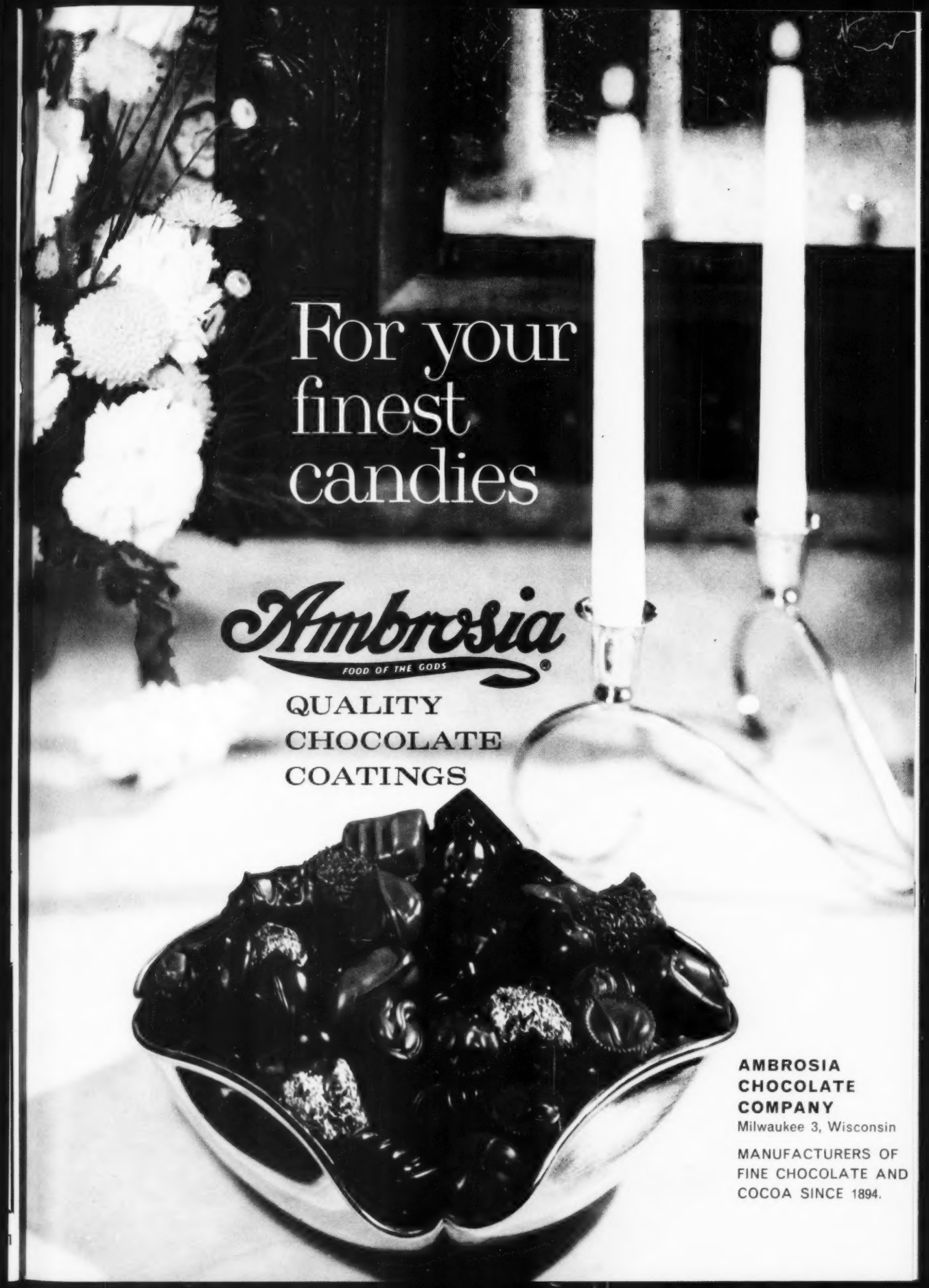
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NEWSMAKERS

Douglas S. Banwell is new sales representative for the Flavor division of International Flavors & Fragrances (Canada) Ltd. His headquarters are in Toronto.

Florasynth Laboratories, Inc., New York City, has opened a sales office in Philadelphia at 1418 Walnut St. **Frank Carmi** is sales manager of the district.

F. Ritter & Co., Los Angeles producer of flavorings, has added **John H. Ehresmann** to the Southern California sales staff. He has been in the industry for the past eight years, and calling on the trade throughout the 11 western states for the past five years. Ehresmann is vice president of the California Flavoring Extract Manufacturers Association, and a member of the local section of the Institute of Food Technologists.

SuCrest Corporation is the new name of American Molasses Company, approved by stockholders at the annual meeting in mid-October.

The beet sugar industry has reorganized the public relations program conducted for a number of years by Western Beet Sugar Producers, Inc., which is being dissolved. Some of the functions performed by this organization have been transferred to the United States Beet Sugar Association, the industry's national trade association which has headquarters in Washington, D. C. Other functions will be conducted by the individual beet sugar companies in their own operating areas.

Blaine Crouch is new manager of the Chicago office of Verona Aromatics. Crouch is well known in the industry, having been associated with the flavor and aromatic business for the past 13 years. He joined Verona, Newark, N. J., recently. The Chicago office has been moved to 6027 N. Northwest Highway, Chicago 31.

B. Crouch

Harry W. Schuemann is new director of research and development at Ambrosia Chocolate Company, Milwaukee. He will work under the supervision of Technical Director Dr. Roy F. Korfhage, and will be responsible for all research and development projects.

H. Schuemann

Schuemann is a graduate of Northwestern University, where he majored in chemistry and mathematics. He has had 22 years in the confectionery industry. In addition, he is a member of the Institute of Food Technologists, the American Association of Candy Technologists, the research committee of the National Confectioners Association, and of the Research and Development Associates of the Quartermaster Corps.

Harold G. Kazanjian has formed a marketing and general business consultation firm with offices in Hotel Biltmore, New York City, and at Middlebury, Conn.

H. Kazanjian

Kazanjian formerly was executive vice-president, member of the board of directors and member of the executive committee of Peter Paul, Inc.

He was graduated from the University of Pennsylvania Wharton School of Finance and Commerce, and attended the Academy of Advanced Traffic in New York. In 1957 Kazanjian served as an advisor to the United States delegation to the United Nations Food and Agriculture Organization in Rome, Italy. He has served on the Publicity, Edible Nuts and Transportation committees of the National Confectioners Association.

The R. E. Funsten Co. has been purchased by Pet Milk Co., St. Louis, and the Funsten President Hugh L. King was named president of the Funsten Nut Company, wholly owned subsidiary of Pet Milk. The new Pet division will be operated by Funsten management and em-

Three candy divisions of Beatrice Foods Co., Chicago were presented placques in recognition of special achievement during the firm's 17th annual President's Month, recently. Left to right are: **M. D. Hamilton,** vice president of Thos. D. Richardson Co., Philadelphia, who is observing his 25th year with the firm; **William G. Karnes,** president of Beatrice Foods Co.; **John W. Hoermann,** executive vice president of M. J. Holloway & Co.; **Harold H. Hill,** executive vice president of the D. L. Clark Co., Pittsburgh, Pa., and Evanston, Ill.; and **William J. Powers,** vice president of Richardson. Awards were made at the annual meeting of the Grocery Products division of Beatrice Foods.

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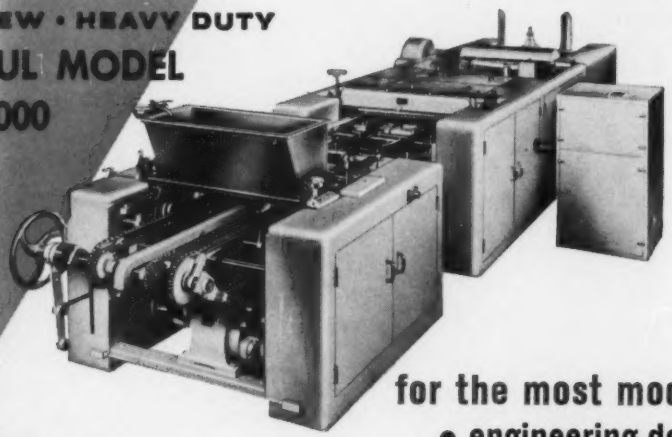

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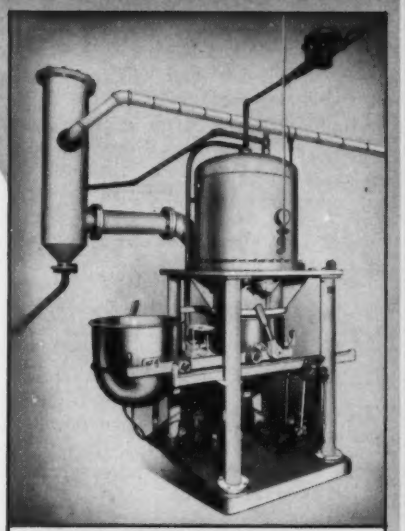

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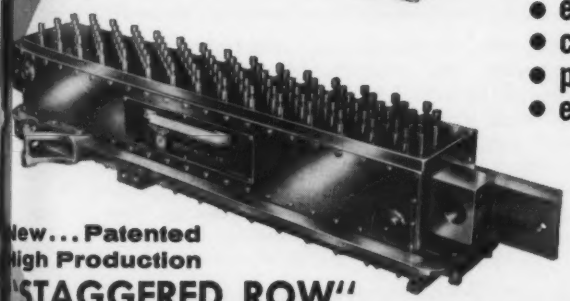

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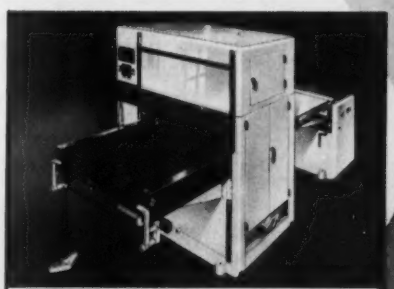

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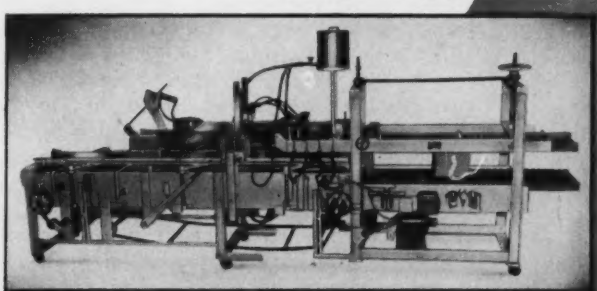

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ployees, and will continue existing relationships with its growers and brokers. With this acquisition, Pet Milk Company will operate some 80 plants throughout the U. S. and Canada. Products range from Funsten pecans, black walnuts, almonds and English walnuts, the Pet Milk products, frozen pastries, liquid diet food and cheese to the Canadian-made Van Kirk and "Chipits" chocolate products, etc.

Leonard Waldt is new senior food technologist in the Fine Chemicals Research Laboratory of Shulton, Inc., New York City. Prior to joining Shulton, Waldt was chief food chemist at Morningstar-Paisley, Inc., and previously was associate food technologist for General Foods Corp. He is a member of the Institute of Food Technologists, American Society of Bakery Engineers, American Chemical Society, American Association of Cereal Chemists, and American Association for the Advancement of Science.

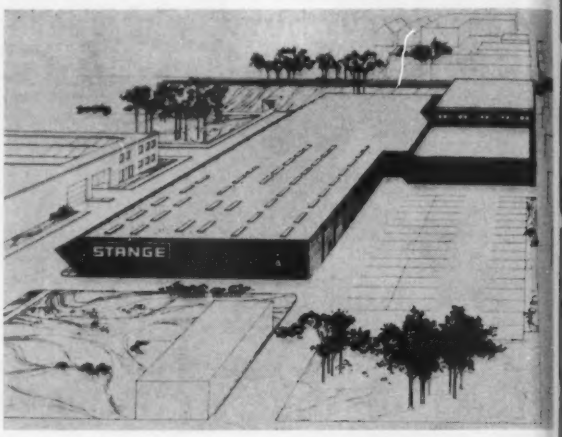
Fritzsche Brothers, Inc., New York City, has introduced a new, high-grade brand of citrus oils, labeled Citrus Valley Brand. Fritzsche announced that, following the resignation of its distributorship for a California packer, it has firmly secured from other sources a continuous supply of choice quality citrus oils. These are being expertly blended by the essential oil firm and marketed as Citrus Valley Brand Oil Lemon USP and Oil Orange USP.

James Mackey is representing the Henry H. Ottens Mfg. Co., Philadelphia producer of flavor concentrates, certified colors and specialties for confectioners, in the New England area.

William C. Potter has been named branch manager of the Minneapolis, Minn. office of Fritzsche Brothers, Inc. Potter's territory for the producer of essential oils, aromatic chemicals, and flavor and fragrance compositions includes North and South Dakota, Nebraska, Minnesota, northern Iowa and most of Wisconsin.

The 53rd Annual Convention of the **Flavoring Extract Manufacturers' Association** has been scheduled for April 29 through May 2 at Skytop Lodge, Skytop, Pa.

John L. Swartz has been named national sales manager of the Rockwood Chocolate Company, wholly-owned subsidiary of The Sweets Company of America, Inc. He is also sales manager of the ice cream division. For 15 years, Swartz served as executive director of the retail products division, S. Gumpert Company and as sales manager of their ice cream division.



Artist's concept of the new Stange facilities.

The Wm. J. Stange Co., manufacturer of seasonings and spices, has started a plant expansion program at company headquarters, 342 N. Western Avenue, Chicago.

Ground was broken Oct. 30 for the new buildings on land acquired from the Chicago Land Clearance Commission which is contiguous to the present general office building. The new buildings will add 550,000 sq. ft. of production and warehousing facilities to the present quarters.

Candy to be honored; need display material

The more people are told about candy, the more candy will be thought of as gifts, snacks, and just plain enjoyment. That's why the latest promotion of the Candy, Chocolate and Confectionery Institute is particularly significant and important to everyone earning his livelihood in the candy business.

What is the latest promotion of the CCCI? During December—for the entire month—the CCCI has arranged to have a feature display in the Chicago Public Library. Now this at first sight may not seem too important, but considering that Chicago is the Candy Capital of the World, and Illinois is the leading producer of candy in the United States, and December is the heaviest candy buying month . . . everywhere in the country . . . the focus changes. The candy display in the Chicago Public Library (located in the heart of the Loop) is an extremely timely and important promotion for the entire industry.

Now, what does this mean to those manufacturing confectioners who are not part of the Chicago scene? Two things: First, the CCCI needs to find the following items to help tell the early history of the candy industry: antique candy jars or dishes, old time valentine heart boxes, lead molds, penny candy display case,, original candy vending machines, ancient candymaking equipment—small kettles, spoons, etc., dipping forks, and what have you? Also needed are raw material ingredients from which candy and chocolate are made, such as: sugar, cocoa beans, corn syrup, colors, flavors, nutmeats, licorice, etc. Samples of items "in growth" and finished stages are wanted. These borrowed goods will be returned, and credit will be given to those supplying the items.

If you have items to lend the CCCI, contact Edward Randegger, Theodore R. Sills & Co., 39 So. LaSalle St., Chicago 3, Ill.

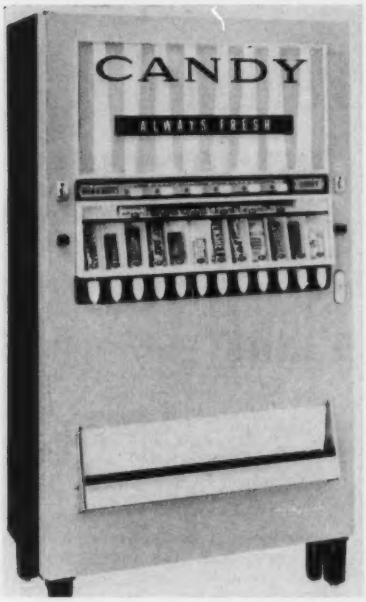
Second, the idea of telling the story of candy through a display in the Chicago Library does not need to be confined to Chicago alone, but can be done in every public library across the nation throughout the year. *This is where you can help generate more interest in candy at the local level.* You can bring the story of candy right down to the consumer in your area.

Undoubtedly the CCCI will investigate the possibility of telling interested individuals and groups how to go about such a project. Who knows maybe a packaged, portable display set can be arranged for showing across the nation? It's worth investigating.

New trends in vending candy

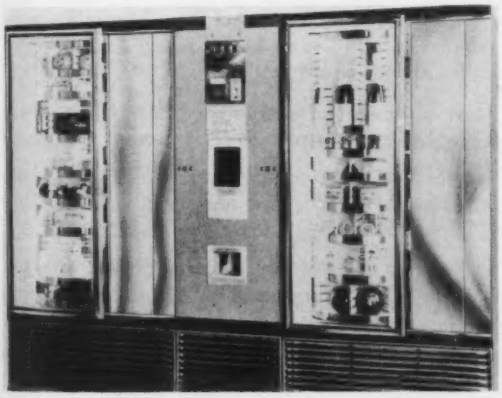
(Highlights of Automatic Merchandising Show)

Coin-operated Rack Merchandiser sells 110 different items from automatic dispensing rods. For candymakers, this means candy packaged in film bags with header labels can be vended on the Rack Merchandiser. Special grommet is required. Products on the unit are priced from 10¢ to $1.00. Manufactured by the Vendo Co., Kansas City, Mo.



Seeburg candy vendor was shown. It is designed in modular style, and features automatic rotation of stock. Offers twelve candy selections and gum and mints. Vends candy at any three prices between 5¢ and 50¢; gum and mints for either 5¢, 10¢ or both. Has first-in, first-out feature, and coin changer.

Below: Multi-purpose Merchandiser can be used to sell boxed candy, among 23 other items. Unit accepts coins, $1 and $5 bills, up to $9, and returns exact change. Although not yet in production by Universal Match Corp., the machine will be a part of the vending scene of the near future.



"Automart" will accommodate boxes of candy along with other items. Unit has bill changer which validates and accepts good money, but rejects foreign or counterfeit. In the machine, up to $5 in bills or coins are accepted and "totalized" to allow purchases to be made in 25¢ increments. Each "Automart" displays more than 100 items of merchandise, and sells up to 260 different items. AC Automatic Canteen Cervices, Inc.

Blumenthal Bros. Chocolate Co., Philadelphia showed its new package for the vending trade which has sharply reduced handling costs and gives good protection for 5¢ vend count boxes of Goobers, Raisinets and Sno-Caps. It surplants the usual 120 count case. The products are packed in cases of sixteen 30 count bundles. Each 30 count is wrapped in Kraft paper for greater protection, and is perforated down the middle to give two 15 count bundles, if needed. The vending pack is same price as 120 count merchandise.

Boxed candy up to 8" x 6½" x 4⅜" can be dispensed through the "Full-Line" universal vendor shown by Rudd-Melikian, Inc. Unit gives good product visibility without 'picked-over' look, and offers first-in, first-out dispensing.

Published Just for the Candy Plant

Confectionery Analysis and Composition
by Stroud Jordan and Katheryn E. Langwill

This volume, first published in 1946, is still the only published reference work on the subject of confectionery analysis. It concerns itself with applicable data that covers composition of basic raw materials as well as that of the finished confections in which they have been employed.
116 pp. – $6.00

Confectionery Problems
(Confectionery Studies, Number 1)
by Stroud Jordan

Stroud Jordan's reputation as an important candy technologist is based on this his first book. Published in 1930 it is still, in many areas, the final word on technology in the industry. Jordan's sense of responsibility to record his discoveries and knowledge for the benefit of the industry caused him to produce more writings on the technical and scientific aspects of candymaking than any other person in the field. The recognition given him in the form of the establishment of the Stroud Jordan Medal by the American Association of Candy Technologists rests on this sense of responsibility.
347 pp. – $6.00

A Textbook on Candy Making
by Alfred E. Leighton

Here is a textbook where the reader can learn the basic fundamentals of candy making, the "how" and "why" of the various operations in non-technical terms. Particular attention is given to the function of raw materials, and why each is included in a formula.
175 pp. – $6.00

Choice Confections
by Walter Richmond

This book, now in its second printing, is written primarily for the manufacturing retailer. It contains 365 formulas given in two batch sizes, one for hand work and one for machine work. All of these formulas have been production tested and have proven to be of great help to manufacturing retailers in varying old items and developing new ones. The book also contains a glossary of candy terms and chemical terms, a complete chapter on chocolate coating methods and a chapter on ingredients and their uses. It is an important and useful book for all manufacturing retailers.
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CALENDAR

Nov. 10; Los Angeles Confectionery Sales Club, Rodger Young Auditorium (12:00 Luncheon)

Nov. 14; Boston Section, American Association of Candy Technologists, Beacon Street Hotel, Boston. (6:00 p.m. Dinner) Subject: Chocolate Tempering.

Nov. 14; Philadelphia Section, American Association of Candy Technologists, Dairy Maid Restaurant, Philadelphia. (6:30 Dinner meeting)

Nov. 17; St. Louis Candy Sales Association. (Annual Stag Party)

Nov. 17; American Association of Candy Technologists, Atlanta Section, Druid Hills Country Club, Atlanta. (6:00 p.m. Dinner)

Nov. 18; Association of Manufacturers of Confectionery and Chocolate, Inc., Annual Dinner Dance, Crystal Ballroom, Park Lane Hotel, New York City.

Nov. 20; Confectioner's Salesmen's Club of Philadelphia, Inc., 2601 Parkway, Philadelphia, Pa. (1:30 p.m.)

Nov. 21; American Association of Candy Technologists, Chicago Section, Austin Fine Arts Club, 808 No. Parkside Ave., Chicago. (6:00 p.m. Dinner) Speaker: M. N. Neis, Package Machinery Co., "Candy Wrapping Machinery."

Nov. 24; Boston Confectionery Salesmen's Club, Inc., Kenmore Hotel, Boston (8:00 p.m.)

Nov. 25; Southwestern Candy Salesman's Association, Sammy's Oak Lawn Restaurant, Dallas (12:00 Luncheon)

Nov. 27-Dec. 1; Exposition of Chemical Industries, N. Y. Coliseum, New York City. (Mon. Noon to 10 p.m.; Thurs. 10 a.m. to 10 p.m.; Tues., Wed., and Fri. 10 a.m. to 6 p.m.)

Dec. 1; St. Louis Candy Sales Association, Congress Hotel Union & Waterman Ave., St. Louis (7:30 p.m.)

Dec. 1-3; National Automatic Merchandising Association, Western Conference and Exhibit, Ambassador Hotel, Los Angeles, Calif.

Dec. 4; Retail Confectionery Association of Philadelphia, Dairy Maid Restaurant, Philadelphia (6:30 Dinner)

Dec. 4; Denver Mile Hi Candy Club, Denver Athletic Club, Denver (7:45 a.m. Breakfast)

Dec. 11; American Association of Candy Technologists, New York Section, Busto's Restaurant (6:00 p.m. Dinner) Speaker: C. Mascherin, Carle & Montanari, "Forming."

Dec. 14-15; Western Confectionery Salesmen's Association Annual Convention, Pick-Congress Hotel, Chicago.

Dec. 18; Confectioner's Salesmen's Club of Philadelphia, 2601 Parkway, Philadelphia (1:30 p.m.)—Election of Officers.

Dec. 29; Boston Confectionery Salesmen's Club, Inc., Kenmore Hotel, Boston (Annual Meeting)

Dec. 30; Southwestern Candy Salesman's Association, Sammy's Oak Lawn Restaurant, Dallas (12:00 Luncheon)

1962

Jan. 12-14; Associated Retail Confectioners of North America, Southern Regional Conference, Deauville Hotel, Miami Beach, Fla.

Jan. 20; Associated Retail Confectioners of North America, Eastern Regional Conference, Commodore Hotel, New York City.

Jan. 22-25; Plant Engineering & Maintenance Show, Convention Hall, Philadelphia.

Feb. 21-23; Associated Retail Confectioners of North America, Western Regional Conference, Seth Thomas Inn, Monterey, Calif. (Held in conjunction with Western Candy Conference).

February 21-23; Western Candy Conference, Mark Thomas Inn, Monterey, California

Feb. 27-28, March 1, 1962; Western Candy Show and Convention of National Candy Wholesalers Association, Flamingo Hotel, Las Vegas, Nevada.

April 9-12; National Packaging Exposition and Conference, Coliseum, New York City.

April 25-27; PMCA Production Conference, Franklin & Marshall College, Lancaster, Penna.

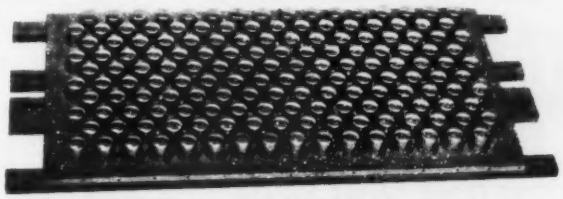
April 29-May 30; Flavoring Extract Manufacturers' Association 53rd Annual Meeting, Skytop Lodge, Skytop, Pa.

June 3-7; National Confectioners Association, The Conrad Hilton, Chicago, Illinois

June 3-6; Associated Retail Confectioners, The Drake Hotel, Chicago, Illinois

June 21-23; Pennsylvania Manufacturing Confectioners Association, Galen Hall, Pa. (Annual Meeting)

Sept. 8-16, 1962;—International Food Congress, 5th, New York Coliseum, New York City.



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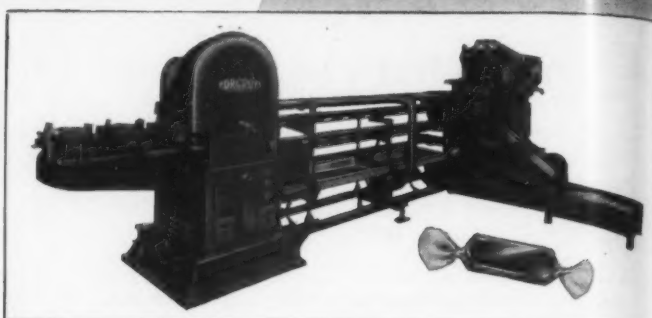

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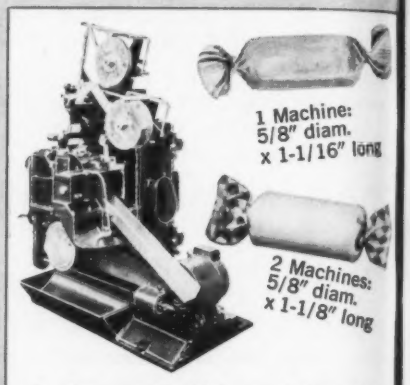

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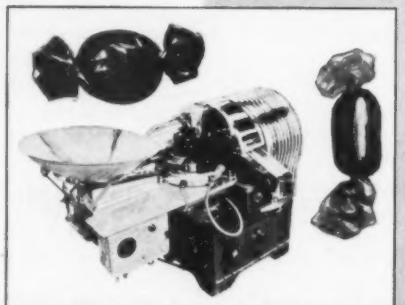

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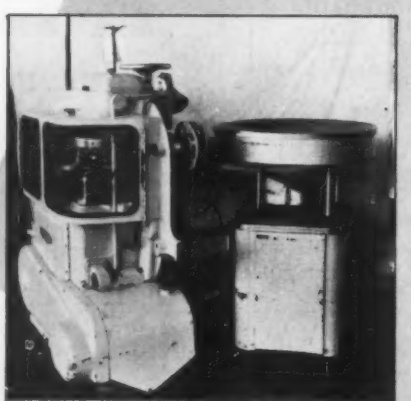

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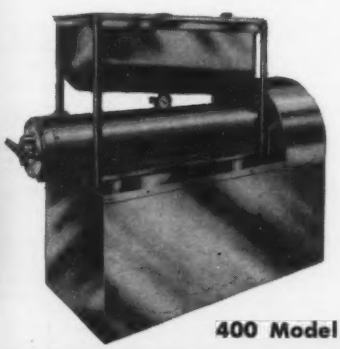

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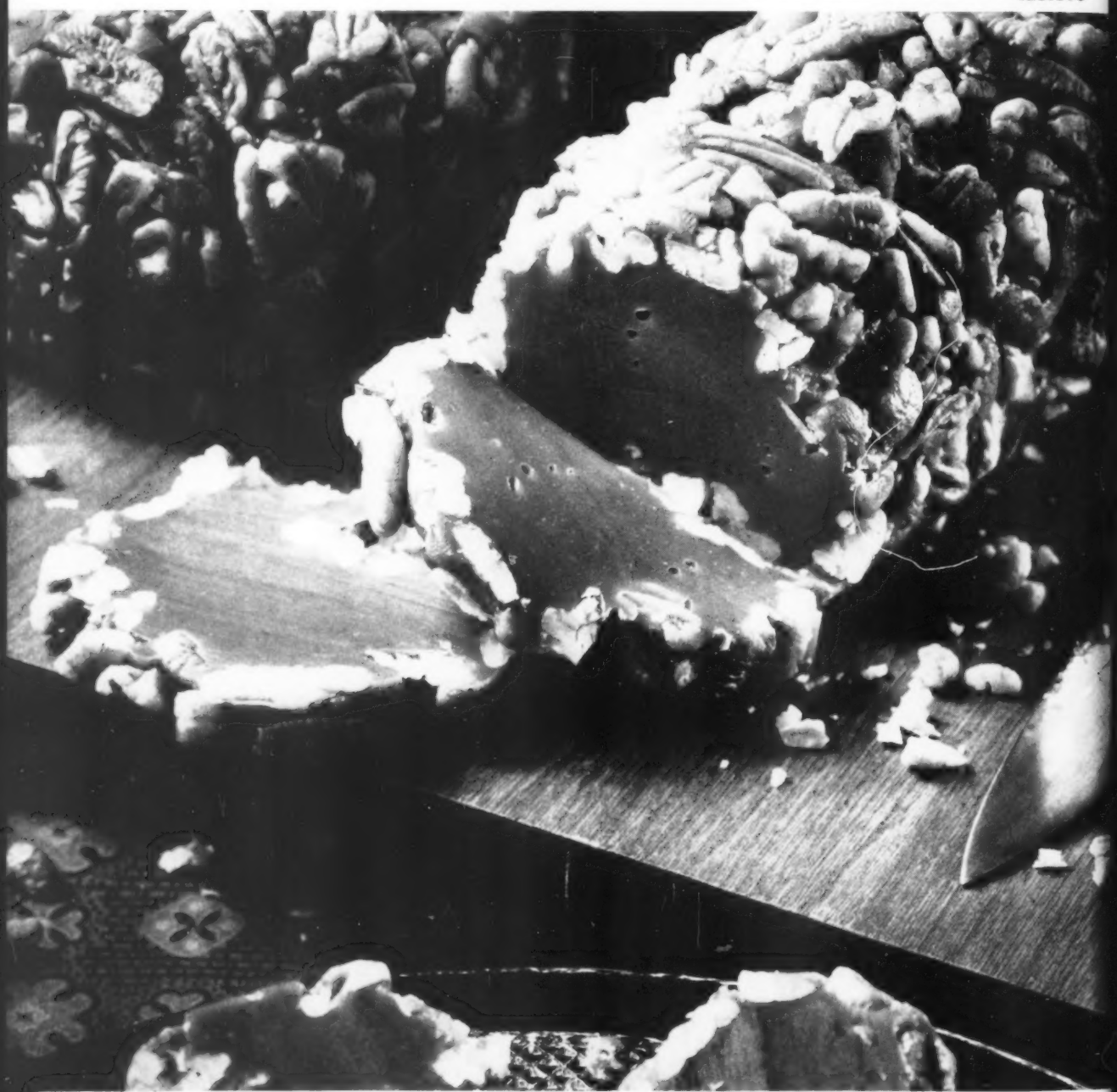

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